BY ORDER OF THE LIEUTENANT GOVERNOR OF BENGAL * FORWARDED

PROGRESS REPORT

ON

FOREST ADMINISTRATION

IN

UPPER BURMA

FOR

1889-90.

BENGAL SECRETARIAT LIBRARY.

By J. W. OLIVER, Esq.,
OFFG. CONSERVATOR OF FORESTS.

WITH A REVIEW BY THE CHIEF COMMISSIONER AND THE ORDERS OF THE GOVERNMENT OF INDIA.

RANGOON:

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRINTING, BURMA.

1890.

No. 932F., dated Simla, the 31st October 1890.

From—SIR E. C. BUCK, Secretary to the Government of India, Revenue and Agricultural Department,

To—The Chief Commissioner of Burma.

I AM directed to acknowledge the receipt of Mr. Kynoch's letter No. 486-69M., dated the 18th August last, forwarding the Annual Progress Report on Forest Administration in Upper Burma for the year 1889-90, together with your Resolution thereon. The Government of India have again to record their satisfaction at having received the Report within the time fixed for its submission.

2. The exploration of the forests, referred to in the second paragraph of the Government of India's review of the Report for 1888-89, was greatly facilitated by the more settled state of the country during the year under review, and much useful knowledge was acquired of forests which were till then unexplored. Agreements were concluded with the remaining licensees of the ex-King, and, with the exception of Maung Bauk's failure to pay the amount due to Government, no complication is reported. The maintenance of the forests worked under these agreements is secured, and their deterioration by over-working safeguarded, in the first place, by the Forest Regulation and Rules, and, secondly, by the stipulation that only such teak trees as are girdled by the Department shall be felled or removed. The duty of the Forest Officers to see that this latter safeguard is carefully observed and that the Rules are enforced presents no special difficulties.

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Your remarks on the forests of the Shan States, as contained in paragraph 3 of your Resolution, have been read with interest; and your view, that the manner in which these forests should be administered can only be arrived at after they have been reported upon by a Forest Officer, is concurred in. The Government of India consider that it should be possible, now that the Staff of the Department is at nearly full strength, to spare one or more officers for the exploration of the forests on the drainage system of the Salween river.

3. At the close of the year, an estimated area of 8,895 square miles, exclusive of the 35 square miles of Unclassed Forests in the Ruby Mines District, had been explored. The estimates of area of the various tracts are, of necessity, extremely rough in some cases, and they will be liable to considerable modification as more detailed information is gained respecting them. Although the paucity of Civil Officers precluded the completion of any Forest Settlements during the year under review, it is observed with satisfaction that several areas were selected for reservation, and that up to the close of the year the area preliminarily notified exceeded 2,000 square miles. Proposals for further reservations were also under consideration, comprising 155 square miles in the State of Wuntho and 359 square miles in the Chindwin Division. The Government of India are glad to learn that you found it possible to appoint a special Forest Settlement Officer in April, and that you hope to spare one or two Civil Officers for this work during the ensuing season. The formation of Cutch Reserves in the Pyinmana District has met with attention, but less progress than might have been expected appears to have been made in dealing with similar tracts in the Minbu and Yaw Divisions, in the latter of which the cutch forests are described by the Conservator as being very fine. I am to suggest that another season should not be allowed to pass without a thorough examination being made of the cutch-growing tracts on the Irrawaddy drainage, as well as of those referred to in paragraph 6 of your Resolution. Your attention is called to the remarks made on this subject in the review of the Forest Report for Lower Burma.

4. It has not been reported whether the map of the 203 square miles surveyed in the Mu Division in 1888-89 has been published, or what steps are being taken to permanently record the survey work completed during the year under review, which compares favourably with that previously executed. The

regular publication of all maps as soon as compiled, through the agency of the Forest Survey Branch, may, in the opinion of the Government of India, continue to be arranged for.

Linear valuation surveys, upon the data furnished by which you have been able to decide against the further girdling of teak in the Western Pyinmana and Theingôn forests, might be extended with advantage to all forests with a view to the regulation of girdling. Countings on a large scale appear to have been made in three divisions only, and, since the linear valuation surveys have enabled you to decide important matters in regard to girdling operations in certain forests, the desirability of continuing these valuations and extending them to all forests would seem to be unquestionable. The Conservator indicates, in paragraph 24 of the Report, that, with few exceptions, the forests have been overworked, and, if this is so, the urgent need for such Working-Plans as he has been able to submit for the Western Pyinmana Forests, based on linear valuation surveys, cannot be too prominently set forth.

5. The building of offices and of dwelling-houses for officers and subordinates continued to receive attention. A sum of Rs. 16,181 was expended on new buildings, while repairs cost Rs. 1,170.

6. The measures taken by you to protect the interests of the Bombay-Burma Trading Corporation, Limited—*viz.*, raising the export duty on all converted teak taken to Lower Burma from Rs. 10 to Rs. 25, and prohibiting the export of teak timber in the log except by forest license-holders—have already received the approval of the Government of India, as conveyed in my letter to your address, No. 1003-F., dated the 23rd September 1889, His Excellency in Council is glad to learn that these measures have been effective.

Your views in regard to the enforcement of the Forest Law have the full concurrence of the Government of India. The number of offences dealt with, although exhibiting a considerable increase, is still small, as indicated in the following comparative statement :—

Year	New cases taken into Court.	Compounded cases.	Total.	Proportion of Convictions to total number of cases decided by Courts.
				Per cent.
1889-90	99	47	146	81
1888-89	9	16	25	93
Difference in 1889-90 ...	+90	+31	+121	—12

7. Systematic fire-protection has, as you observe, not as yet been attempted. The settlement and demarcation of the permanent Reserves are obviously steps which must precede their protection and improvement; and the energy of the Forest Staff is properly directed in the first instance to these measures and to the girdling operations required to meet the obligations of Government to the forest licensees.

8. Of a total of 65,000 trees, the girdling of which you sanctioned, only 36,180 trees were, for various causes, actually girdled. By early and more efficient arrangements, it should be possible to work up to the programme far more closely, and the Government of India will be glad to see such orders as you may think fit to issue in regard to girdling fully carried out.

9. The outturn of the year compares with that of the previous year as follows :—

	Timber.	Fuel.	Bamboos.	Minor Produce.
	C. ft.	C. ft.	Number.	Rs.
By Government agency ...	17,394	...	...	...
By Purchasers	9,397,136	1,233,449	14,030,132	1,38,931
Total in 1889-90 ...	9,414,530	1,233,449	14,030,132	1,38,931
" " 1888-89 ...	7,379,241	743,675	10,694,956	66,186
Increase in 1889-90 ...	2,035,289	489,774	3,335,176	72,745

The increase under timber was due to the exceptionally favourable year, which enabled the Bombay-Burma Trading Corporation alone to extract no less than 131,565 tons.

The larger outturn of firewood and bamboos is accounted for by the better check resulting from a more stringent collection of dues.

Under minor forest-produce the additional revenue is chiefly made up of collections on rubber, which had hitherto been credited to Land Revenue. Cutch brought in Rs. 51,000, which is not materially greater than the return of Rs. 46,000 obtained in the previous year; while the receipts from wood-oil were almost double.

10. The financial results exceeded expectations, in consequence of the unusually favourable year for timber-extraction. Compared with the previous year, the figures stand thus :—

Year.	Receipts.	Charges.	Surplus.	Proportion of Surplus to gross Revenue.
	Rs.	Rs.	Rs.	Per cent.
1889-90	18,06,069	2,73,799	15,32,270	85
1888-89	15,79,928	7,85,129	7,94,799	50
Difference in 1889-90 ...	+2,26,141	—5,11,330	+7,37,471	+35

The gross revenue was more by Rs. 2,26,141, while the surplus, increased by the amount of the abnormal liabilities cleared off in the previous year, exceeded that of 1888-89 by Rs. 7,37,471.

Classified under the different main heads, the year's results compare with those of 1888-89 as follows :—

Year.	Departmental Timber Operations.			Other Revenue.			Formation, &c., of Forests.	Total.		
	Receipts.	Charges.	Surplus.	Receipts.	Charges.	Surplus.	Charges.	Receipts.	Charges.	Surplus.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1889-90 ...	3,514	1,165	2,349	18,02,555	1,36,679	16,65,876	1,35,955	18,06,069	2,73,799	15,32,270
1888-89 ...	80,703	5,732	74,971	14,99,225	6,55,630	8,43,595	1,23,767	15,79,928	7,85,129	7,94,799
Difference in 1889-90.	—77,189	—4,567	—72,622	+3,03,330	—5,18,951	+8,22,281	+12,188	+2,26,141	—5,11,330	+7,37,471

11. The orchard at Bernardmyo is now reported to be stocked with 296 grafted European fruit trees and 23 walnut trees, all of which are well established. This experiment has been promptly and successfully carried out. There should be no difficulty in grafting on to indigenous stock or easily raised seedlings, and, in view to future distribution, the Government of India consider that this should be done. The introduction of *Pinus longifolia* into the oak and chestnut forests near Mogok is of noteworthy importance, as are also the satisfactory results obtained with deodar and *Pinus excelsa* at Bernardmyo. Judging from the results so far obtained, these Himalayan species may be usefully tried at suitable elevations throughout the Shan Hills, together with the various species of *Eucalyptus* which you are taking steps to have propagated.

12. The Government of India have again to record their appreciation of your good administration of the Forests in Upper Burma, and to thank you for the complete review of the Conservator's Report. His Excellency in Council is glad to observe that, within the comparatively short period of three years, the Forest Administation has been organized and placed on a footing which compares favourably with that in other Provinces, and to endorse your commendation of Mr. Oliver and the other Forest Officers, who have not spared themselves in overcoming the difficulties inherent to work in a newly annexed territory.

Appendix showing the discrepancies noticed in the Upper Burma Forest Administration Report for 1889-90.

Paragraph 80 of Report.—" Rs. 78,840," in the third line, should apparently be " Rs. 78,905," being the difference between Rs. 1,67,114 in 1889-90 and Rs. 88,209 in 1888-89.

Form No. 49.—The totals of the columns of square miles have not been given. The 250 square miles excluded from the Panlaung Forest, the 10 square miles from Yeni, 15 from Myinbyin, 5 from Yonbin, and 5 from Taungnyo have not been shown in the column " Excluded or transferred."

Form No. 56 —The entries under Disposals of Government timber (" Removed by purchasers from depôts," "Used departmentally," " Drifted away," " Stolen from depôt ") have not been totalled, as has been done in the case of corresponding entries under Disposals of drift timber.

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RESOLUTION

ON THE

FOREST ADMINISTRATION PROGRESS REPORT

OF THE

UPPER BURMA CIRCLE

FOR

The year 1889-90.

Extract from the Proceedings of the Chief Commissioner, Burma, in the Forest Department,—No. 69M., dated the 16th August 1890.

READ—

Report of the Conservator on the administration of the forests in the Upper Burma circle for the year 1889-90.

RESOLUTION.—The Conservator's report contains an interesting account of the work of the Forest Department in Upper Burma during the past year. The settlement of most parts of the country enabled Forest Officers to move about with greater freedom, though in the forests guards were still considered desirable. Work was carried on on the lines of previous years, principally with a view to ascertaining the capabilities of the forests and to preparing plans for their protection and conservation. Large additions were made to the knowledge already acquired of the resources of the country and plans for reserving considerable areas of valuable forest were prepared. At the same time steps were taken by degrees to introduce among the people respect for the forest laws. Girdling operations also were undertaken to provide timber for the lessees.

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Forest leases.

2. The negotiations for the renewal of leases held under the late Burmese Government were concluded in the year 1888-89, only two leases, namely, those of the Shweli and Hlaingdet forests respectively, remaining unsettled at the close of that year. The lease of the Shweli forests, formerly held by Maung Bauk and Maung Mun Taw, was granted during the year under review to Maung Bauk, the surviving partner. The terms of the lease, which is printed as an appendix to the report, are similar to those granted to other lessees. The failure of Maung Bauk to pay the amount due from him to Government has recently rendered the lease subject to forfeiture, a circumstance which will render necessary fresh arrangements in respect of these forests. In the case of the Hlaingdet forest the representatives of the lessees decided to surrender the lease and to become contractors for the working of the forest under Government. An agreement on this basis was signed soon after the close of the year under review. In all the leases which have been granted it has been stipulated that the forests are to be worked in accordance with the Forest Regulation and Rules, and that all girdling is to be done by or under the direction of the Forest Department. It will be the duty of the Forest Officers to supervise the working of the lessees so as to safeguard the interests of the State and to prevent the forests from being overworked.

Shan States forests.

3. In the Shan States the Government has reserved to itself the proprietary right in all forests and minerals. The Sawbwas and their people are, however, free to take whatever gird-

led timber they require for their own requirements, but they must neither girdle trees nor fell green teak nor export timber. The Chiefs have no power to grant leases of the forests in their States, a power which in the time of the Burmese Government was always strictly reserved by the Burmese King. Several proposals have been made for the working of forests in the Shan States, and the question of the manner in which the forests can be best administered with due regard to the interests of the Government and to the claims of the people of the States is still undecided. It has not yet been found possible to depute a Forest Officer for duty in the Shan States. It will be necessary to do this before the question of forest administration in the Shan States can be satisfactorily settled.

Reservation of forests.

4. One of the most important parts of the work of the Forest Officer in Upper Burma is the selection of areas producing teak and other valuable trees for reservation with a view to systematic exploitation, and in order to prevent the exhaustion of the forests and to provide for the needs of future years. Until the annexation of Upper Burma the forests were worked on no principle except that of extracting the greatest possible quantity of timber. It is especially necessary that the work of reservation should be undertaken in order to check this wasteful mode of working and to repair, as far as possible, the ravages already committed. Up to the close of the year 1888-89 proposals had been made for the reservation of forests covering an area of 1,067 square miles. The examination of other forest tracts was continued during the year under review, and proposals were submitted for the reservation of further areas aggregating 946 square miles in the Bhamo, Katha, Mu, and Pyinmana divisions. Preliminary notifications with a view to the reservation of these tracts have been issued; but the paucity of Civil Officers has greatly retarded the completion of these projects of reservation. Until towards the close of the year under review it was not possible to detail an officer for forest settlement duty. In consequence members of the ordinary District Staff had to be appointed Forest Settlement Officers, with the result that the work of settlement has usually been postponed to more pressing duties. In April last a special officer was deputed to take up the work of settling the areas proposed for reservation in the Pyinmana district. The consideration of the Forest Settlement Officer's proposals in respect of these forests does not fall within the scope of this review. Besides the forests in respect of which preliminary notifications were issued during the past year forests comprising an area of 155 square miles in the State of Wuntho were proposed for reservation and have since been notified, while proposals for reserving two tracts in the Chindwin division of an area of 359 square miles were prepared, but not submitted till after the close of the period under review. Further proposals are under the consideration of the Forest Officers. The Chief Commissioner hopes to be able to spare one or two Civil Officers in the coming cold season for forest settlement work, the importance of which is fully recognized.

Examination of teak-bearing tracts.

5. The examination of forests, especially with a view to ascertaining the teak-producing areas, was continued during the open season. It is estimated that by the end of the past year in all 8,895 square miles of forest had been examined. A detailed account of the work done in this respect is given in the

Conservator's report. As the Conservator remarks large tracts still remain to be examined before the resources of the forests are fully known. The officers engaged in examining the forests in 1889-90 made traverse surveys over 2,009 miles with chain and plane-table or prismatic compass. Linear valuation surveys and countings were made over 6,639 acres only as compared with 11,342 acres in 1888-89, the decrease being due to the fact that the Pyinmana and Chindwin officers were engaged on settlement and girdling work respectively.

Cutch reserves.

6. The necessity of forming cutch reserves has been kept in view. The Conservator will be invited to direct his special attention to the early reservation of the cutch-bearing tracts comprising an area of about 180 square miles, referred to in paragraph 12 of his report. In view of the rapid exhaustion of the cutch-bearing forests in Lower Burma the question of cutch preservation in Upper Burma is one of pressing importance.

Protection of the forests.

7. Representations were made during the year by the Bombay Burma Trading Corporation, as lessees of the forests on the eastern side of Upper Burma, that the ancient privilege, continued under the leases to *bonâ fide* residents of Upper Burma, of removing from the forests dead and old girdled timber for their private use was being abused, that numbers of petty traders from Lower Burma were passing themselves off as residents of Upper Burma, and were removing quantities of timber from the forests leased to the Corporation. Part of this timber was being carried by rail to Mandalay, converted there, and sold in the usual course of trade. Part of it was being sawn up at Pyinmana on the railway line and was being transported to Rangoon, where, notwithstanding the duty of Rs. 10 per ton paid on its export from Upper Burma, the cost of working it out of the forests and the railway charges to Rangoon, it realized prices large enough to yield a profit. The Railway statistics did not prove that any great quantity of timber had been brought into Lower Burma in this way; but as the lessees claimed protection on the score that, under the terms of their agreements with Government, they have the sole right to export timber to Lower Burma from the forests held by them, the Chief Commissioner decided to raise the export duty on converted timber from Rs. 10 to Rs. 25 a ton from the 18th July 1889. At the same time the export from Upper Burma of teak timber in the log, except by forest lessees, has been prohibited. Since the issue of these orders no further complaints have reached the local Government.

Breaches of forest law.

8. There was an increase in the number of forest offences prosecuted during the year. In a large proportion of the cases prosecutions were instituted against persons found cutting green teak. Out of 100 cases brought before Courts convictions implicating 126 persons were obtained in 59 cases, 14 cases resulted in acquittals, and 27 remained undisposed of at the end of the year. Forty-seven trifling cases were compounded for Rs. 839-12-0. It is not the Chief Commissioner's desire that the forest law should be enforced with undue strictness at present. But it is necessary to make the people understand that the destruction of green teak will not be permitted.

9. No reserves having been as yet actually formed in Upper Burma, no boundaries have been demarcated. Forest fires were again prevalent throughout the circle, the scanty rainfall of the year contributing to the result. In Pyinmana division, however, where the forests were badly burnt in the previous year, rain fell early and large areas were saved from fire; but as yet systematic fire-protection has not been attempted.

Forest fires.

10. The experimental cultivation of the Eucalyptus tree seems to promise fair results in the Mandalay division and Ruby Mines subdivision. Since the close of the year a parcel of Eucalyptus seeds of different varieties has been received from the Government of Victoria. The seeds have been distributed in the Shan States and in forest divisions where the elevation is sufficient to give the sowings a prospect of success. In places like Maymyo and Lashio and Fort Stedman it is probable that the Eucalyptus will flourish as at Coonoor, and not impossible that it may help to dry the soil and improve the climate. In many parts of the Shan States there are few trees and the Eucalyptus will provide firewood and improve the appearance of the country. The Chief Commissioner attaches importance to the introduction of this tree and desires that the Conservator and the officers to whom seeds have been distributed will do their best to give the experiment a fair prospect of success. Other experiments in the cultivation of exotics mentioned in the Conservator's report are of interest, but do not require detailed notice.

Experimental cultivation.

11. The girdling work of the year was carried on in the Chindwin, Mu, and Mandalay divisions, where sanction was given to the girdling of 65,000 trees in all. The Bombay Burma Trading Corporation asked that 122,500 tons of timber in all might be girdled, but this demand was much in excess both of the Corporation's requirements and the capacity of the forest staff. Owing to difficulties with coolies, illness of officers, and other drawbacks only 36,180 trees were actually girdled. The reports of the valuation surveys made in the Western Pyinmana and Theingôn forests afforded such strong evidence of excessive working in the past that the Chief Commissioner has prohibited the further girdling of teak in both of these forests. The lease of the Theingôn forest by the Bombay Burma Trading Corporation is to be surrendered at the close of the year 1891.

Teak girdling.

12. The following table shows the quantity of teak and other kinds of timber which passed revenue stations in Upper Burma during the year as compared with the figures of the two previous years :—

Extraction of timber.

	Teak.	Other reserved kinds.	Unreserved kinds.	Firewood and charcoal.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons
By Government agency	329	18	...	...	347
By lease-holders under the *ex*-Burmese Government.	141,835	...	...	...	141,835
By local purchasers	37,140	633	8,335	24,669	70,777
Under free permits	.	...	...	. .	
Passed into Lower Burma paying import duty.	1,305	...	.	. .	1,305
Total, 1889-90 ...	180,609	651	8,335	24,669	214,264
Total, 1888-89 ..	139,430	825	7,329	14,874	162,458
Total, 1887-88 .	78,379	212	2,309	17,570	98,470

Owing in some measure to the season being favourable for floating timber there was again a large increase in the quantity of teak worked out of the forests by lease-holders. In no case was work in the forests interrupted by dacoits. The officer working in the Wuntho forest was not obstructed or interfered with. It is true, as mentioned in paragraph 67 of the report, that he was told to leave the forests by the Deputy Commissioner of Katha on account of disturbances on the Wuntho border. But there was no reason for this order, which was countermanded by the Chief Commissioner as soon as he became aware of it. Of the entire quantity of teak brought out by license-holders no less than 131,565 tons were extracted by the Bombay Burma Trading Corporation. This quantity is much in excess of the minimum annual outturn of 50,000 tons required by their agreement with Government. Other lessees did not succeed in extracting the minimum quantity of timber provided in their agreements.

Revenue and expenditure.

13. The revised estimates of receipts and expenditure in the Upper Burma Forest circle in 1889-90 as finally sanctioned by the Government of India were—

	Rs.
Receipts	15,50,000
Expenditure A, Rs. 81,000 } Expenditure B, Rs. 1,89,000 }	2,70,000
Surplus ...	12,80,000

The actual revenue of the year was Rs. 18,06,069 and the expenditure Rs. 2,73,799, leaving a surplus of Rs. 15,32,270. The increase in revenue is mainly accounted for by the receipt of Rs. 58,786, recovered from lessees of forests for short outturn of timber in the previous year, and of Rs. 2,01,193 more royalty received from lessees for timber worked out by them in 1889-90. There was only a nominal increase in revenue from timber extracted for local use and a moderate increase from timber exported to Lower Burma, but the revenue from firewood and charcoal was about double that of 1888-89, while that from cutch reserves rose from Rs. 46,317 to Rs. 50,800. Nearly a lakh and three quarters have still to be recovered for deficient extraction of timber by lessees during the year 1889. Of this amount Rs. 1,57,731 are due by Maung Bauk and his sureties, and Rs. 8,256 by Hadji Mahomed Hadi as transferee of Ko Tu's lease. The revenue from India-rubber in the Bhamo division increased from Rs. 11,717 to Rs. 78,799 in consequence of the change from the monopoly to the licensing system. There was much unfriendly rivalry, however, amongst persons engaged in the trade, and disturbances, which are now the subject of enquiry, ensued. But for these disputes much more rubber would doubtless have been brought down to Bhamo. The Chief Commissioner observes with satisfaction that the Conservator's attention is directed to the improvement of minor heads of revenue. The expenditure of the year calls for no special remarks.

14. The Chief Commissioner desires to record his appreciation of the manner in which the circle has been administered during the year by Mr. Oliver. His acknowledgments are also due to the officers named by the Conservator as having done good work during the year. With scarcely an exception the officers of the circle have displayed energy and interest in the discharge of their duties.

By order of the Chief Commissioner,

H. THIRKELL WHITE,

Officiating Chief Secretary.

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN THE

UPPER BURMA CIRCLE

FOR

The year 1889-90

BY

J. W. OLIVER, Esq., Offg. Conservator of Forests.

CHAPTER I.

Area and Boundaries.

1.—*Area.*

A.—Reserved Forests.

Forest settlements in progress.

No reserved forests were finally settled during the year, but the claims of the villagers in the areas proposed for reservation in the Ruby Mines district were enquired into and the Forest Settlement Officer's report has been submitted. In the Pyinmana division Major Eyre was appointed Forest Settlement Officer shortly before the close of the year; work was commenced on the 15th March and the enquiry into all claims was completed by the middle of June. In the Mu division the Myoôk, who had been appointed Forest Settlement Officer, reported on the claims of villagers in the Yabin, Pyaungthwè, and Maingwun forests, but it is understood that his enquiry was considered insufficient and that he has been called on to supply further information.

Enumeration of proposed reserves.

2. The areas proposed for reservation and preliminarily notified during the year are shown in the following statement:—

Division.	Forests preliminarily notified in previous years.	Forests notified during 1889-90.			Total square miles.
		Name of forest.	Square miles.	Number and date of notification.	
	Sq. miles.				
Bhamo ...	...	Namyin East and West	64	Notification No. 87, dated 27th February 1890.	64
Chindwin ...	442	...	...	...	442
Katha ...	35	Petsut, Auktaw	74	Notification No. 87, dated 27th February 1890.	487
		Mezachaung ...	336		
		Mawhun ...	42		
Mu ...	...	Yabin ...	60	Notification No. 88, dated 3rd July 1889.	190
		Pyaungthwè ...	70		
		Maingwun ...	60		
Pyinmana ...	590	Yanaungmyin ...	15	Notification No. 136, dated 17th September 1889.	830
		Kaing ...	45		
		Palwè ...	100		
		Puzaungtaung ...	80		
Total ...	1,067		946		2,013

The East and West Namyin reserves were originally notified as containing 700 square miles, but a further examination of the valley has shown that only about 64 miles are suitable for reservation. The principal teak tracts are at the southern end of the valley. Teak is generally found unmixed with other species in groves and belts along the banks of streams. The forest contains much fine timber, but a large proportion is over mature and has been damaged by fires.

Further reservation in progress.

3. Proposals have been submitted for the reservation of the Sareiktha, Nankyitha, and Nanbyan forests in the Mu valley, aggregating 155 square miles; and for two tracts to be known as the Kindat and Yu forests, aggregating 359 square miles, in the Chindwin division, making a total of 514 square miles. Further proposals for the reservation of the forests examined during the past season are in course of preparation and will shortly be submitted.

B.—Protected Forests.

Alterations in Form 49.

4. The area of protected forests which have been more or less examined is now estimated at 8,895 square miles, but large tracts still remain to be explored.

Additional information recorded.

5. The following is a summary of the forests examined and information collected in addition to that recorded in the reports of previous years.

Description of forests in the Bhamo division.

The *Sinbo forests* have been subdivided into (*a*) the Mangin forest, (*b*) the Nôkcho forest, and (*c*) the Mampwa forest. In the two latter all marketable teak has been completely worked out. The former, which is estimated at 41 square miles, is reported to contain a fair quantity of both green and girdled teak, and proposals are being prepared for its reservation.

Uya-Hatha forest, 24 square miles in extent, is situated in the fork formed by the junction of the Mogaung and Irrawaddy rivers. It is estimated to contain a good supply of girdled timber as well as some 6,000 first class green teak trees, and proposals have since been sent in for its reservation.

Paungnet forest, about 12 square miles, is situated due south of Shwegu. It has been completely denuded of all large teak trees and during the last two years large numbers of poles have been girdled, but it is well worth reserving on account of the very promising young growth it contains. The Paungnet is not a floating stream and timber has to be carted out to Shwegu.

Description of the forests in the Chindwin division.

6. *Myittha forest.*—A considerable portion of this forest was girdled over during the year; but, owing to the illness of the officer in charge of the work, only the Kunse and Mauk chaungs were sufficiently examined and surveyed. The principal teak forests are in the portions drained by the Kyi, Tanthe, Seni, Zahaw, Laungtaung, and Nwa streams. Cutch is found generally associated with teak in the southern part of the valley and small forests of it are found near Sihaung in the Kale plains. The forest on the Nwa is reported to have been overworked, but to contain large quantities of young teak.

Mauk and Kunse forest, 125 square miles.—The whole area, the greater part of which will shortly be proposed for reservation, is, with the exception of the higher hill tops, covered by valuable teak and cutch forests. Teak grows to a good size and is remarkably straight. Young saplings are numerous, especially on the lower slopes with an eastern aspect. Three thousand eight hundred and ninety-four trees were girdled in the forest during the past season.

Bôn forest.—The forests on the upper portion of the Bônchaung are rich in teak; parts have been much overworked, but taken as a whole the forest is by no means exhausted. Three thousand seven hundred and thirty-eight trees were girdled in it during the past year and it is estimated that girdling to this extent can be repeated every 10 years.

The forest drained by the Nansipet, Nansipauk, and Nankyinlaw streams, which flow into the Nayinsaya chaung near Yazagyo.—Fear of the Chins has hitherto prevented this forest from being worked. It yielded 3,601 trees this year and contains large supplies of old girdled timber.

Kampat forest, situated on the Nampamun, Nansawin, and Pyaungbôk chaungs, which fall into the Kampat stream, a tributary of the Yu river above Kampat.—This is a magnificent teak forest almost unworked. It yielded 8,969 trees this year and it is estimated that in the future trees can be girdled at the rate of 1,200 a year.

Description of forests in the Katha division.

7. *Sekkala forest, 10 square miles, on the headwaters of the Sekkala stream, which forms the boundary between Momeik and the Bhamo district.*—The forest is rich in teak, but has been heavily girdled over within the last few years. The Sekkala is a tortuous stream much overgrown with jungle and no timber has as yet been brought out. Maung Bauk commenced work there last rains and felled and partly dragged some 1,000 logs, but two of his men dying, the rest struck work, and nothing has since been done.

East Shweli forests.—The forests on the east bank of the Shweli below Mabein, drained by the Magyi, The, Kun, Maingtha, Nahan, Budaung, and Nampaw chaungs, have all been more or less explored. They extend over some 620 square miles, but of this at least 25 per cent. is In forest without teak, and a considerable portion near the sources of the streams is occupied by Kachin taungyas and pônzos; elsewhere the forest is very rich in teak, but it has been heavily worked, the stumps being 3½ times as numerous as the first class trees, and it can stand no further girdling. Young growth is generally abundant, but in the immediate neighbourhood of the Shweli almost every tree fit to yield a house post has been cleared out.

The Kunchaung is obstructed near its mouth by a narrow rocky channel, in which some 1,000 logs are jammed. The logs have been in this position for the last three years, but by blasting a few projecting corners the whole obstruction could be cleared away.

Nampan forest, comprising the area drained by the Nampan, a western feeder of the Shweli, which runs out opposite the village of Pinlôn.—The forest has not yet been examined, but is reported to contain a large quantity of girdled and green teak. The Nampan stream is said to be silted up for some 2 miles from its mouth and on that account has never been worked.

The *Upper Shweli forests* have not yet been examined, but good teak is reported to come from the neighbourhood of Molo.

Description of forests in the Mandalay division.

8. *Madaya forest.*—The forests on the lower portion of the Madaya river between Kingôn village and the Gwechaung were partially examined. Teak was found to be fairly plentiful on Gwe and Satthwa streams, but scarce elsewhere.

Pyaungshu forests. Forests in Thibaw.—Good teak forest was found on the Namsin river, a southern tributary of the Myitngè, which flows into the latter some 15 miles below Thibaw, and teak is reported to occur generally along the valley of the Myitngè, but the forests have not been sufficiently examined to allow of an estimate being made of their extent or capabilities.

Theingôn forest.—The examination of the Theingôn and Ywangan forests leased to the Corporation was completed, and 5,235 dead and girdled teak trees were counted. First class green trees are very scarce and no more girdling can be undertaken.

Forests in the Minbu division.

9. Nothing beyond what was previously known has been recorded of the forests in this division.

Description of forests in the Mu division.

10. The following tracts, all in Wuntho territory, have been surveyed and examined :—

West of Mu river.

Tinwa forests, 24 square miles, comprising the area drained by the Tinwachaung and its tributaries the Wayaw, Kôngwè, Manyauk, and Kubyin streams.—Teak is plentiful in all these valleys, specially so in the Wayaw and Kôngwè chaungs. The Manyauk stream is obstructed by rocks and no girdling was done in it. The remainder of the Tinwa forest yielded 916 trees.

Nabè forest, 13 square miles in extent.—Teak is plentiful at the sources of the stream, which would be good for floating but for a large rock which

will have to be blasted. Eight hundred and two teak trees were girdled here this year.

Wabo Forest; 16 square miles, consists of three long narrow valleys drained by the Wettawma, gaya, and Nyaungchidauk chaungs, tributaries of the Wabo. Teak is fairly abundant in the gaya and Nyaungchidauk valleys, but scarce on the Wettawma. The forests yielded 1,227 trees.

Kalawpa forest, 8 square miles, is situated immediately to the north of the Wabo forest, and comprises two long narrow valleys drained by the Kalawpa and Tinpa chaungs. Being close to the Mu, all marketable trees have already been worked out.

Tagyaing Forest.—This lies to the west of the Nwabè, Wabo, and Kalapa forests. It has not yet been sufficiently examined and the extent of teak-producing forests cannot be given. The stream is difficult for floating, consequently the forest has not been much worked.

East of the Mu river.

Namaw forest, 18 square miles.—This forest hitherto had the reputation of being the best and most extensive teak tract in Wuntho, but this season's survey shows that the teak-producing area only extends over 18 square miles and that there is scarcely a single marketable tree left. What little there is was found along the banks of streams and on the ridge forming the watershed between the Namaw and Kwethi chaungs. The Namaw is a very good floating stream, which accounts for this forest having been so heavily worked. No trees were girdled here.

Nanma forest, 32 square miles, drained by the Nanma and its tributary the Panguchaung.—Teak is scarce and generally found only along the banks of streams, the higher ground being occupied by In and Sagat* trees. All trees fit for extraction have been removed and consequently no fresh trees were girdled.

Khansa forest, 26 square miles.—Teak is found along the bank of the Khansa below Kyudawgaing village and towards the source of the Kwehaung-chaung. Large trees are scarce.

Inga forest; 23 square miles, contains a narrow strip of teak forest along the chaung of that name, but nearly all but small trees have been removed. Teak is also found at the source of the Nyaunghyan, where the Wuntho Sawbwa owns some 700 girdled trees, which he is now working out. The Corporation is also working in this forest.

Description of forests in the Yaw division.

11. The forests along the foot of the Chin Hills, between Laungshè and the Myittha watershed, have been examined. These comprise a strip of teak and cutch forest from 3 to 5 miles wide, and about 40 long, bounded on the east by the cultivated lands of the Saw and Yaw valleys, and merging on the west into pine forests and hill cultivation of the Chins. These forests are very rich in both teak and cutch.

The most valuable teak forests of this division are reported to be on the Kyaw river, which has not yet been examined.

The cutch forests are very fine and have hardly been touched except by ya-cutters, the country being at present inaccessible for carts.

There are also valuable forests of both teak and cutch on the Peinne, Pyindaung, and Man streams, all northern feeders of the Yaw, which have, however, only partially been examined.

Description of forests in the Pyinmana division.

12. An examination of the Paunglaung tract shows that it comprises some 200 square miles of teak-producing forest. It is not so rich in teak as the forests of Western Pyinmana, but large timber is found near the sources of the Mehaw and Nandaw chaungs.

The following cutch tracts were cursorily examined and their limits laid down:—

The *Aingyè forest* is about 30 square miles in area and stretches along the right bank of the Sinthè, from the Tapanchaung to the Kuduchaung.

* Quercus sp.

The *Shwemyo forest*, 60 miles in extent, between the Kudu and Ônbo chaungs.

The *Yezin forest*, about 40 square miles, between the Sinthè and Yezin chaungs, with the Pogôn chaung as the limit on the north.

The *Sinthewa forest*, 25 square miles in extent, stretching along the left bank of the Sittang between Sinthewa and Yônbinzaung.

The *Legathein forest*, about 25 square miles in extent, situated on the east bank of the Sittang between Zibyubin and Mehaw.

2. Boundaries.

No boundary marks.

13. As there are as yet no reserves there is nothing to record under this head.

CHAPTER II.

Surveys, Working Plans, and Annual Plans of Operations.

(a) *Topographical Surveys.*

Surveys, general.

14. The total length traversed with chain and plane-table or prismatic compass amounted to 2,009 miles, from which maps are now being prepared.

Bhamo division.

15. The survey of the principal teak tracts in the Namyin valley has been completed and those situated near Sinbo have been located on the map. The country between the Irrawaddy and the Mogaung river south of Namnyut was also surveyed. Altogether 187 miles were traversed with chain and plane-table by Mr. Palmer, who towards the close of the season was assisted by Mr. O'Bryen.

Chindwin division.

16. In the Myittha valley Mr. Blackwell traversed 70 miles on the Nwa and neighbouring streams, but the work is too incomplete to do more than serve as a basis for future surveys. Mr. Thompson surveyed the greater part of the Mauk and Kunsè chaungs, chaining 66 miles, and has made a sufficiently accurate map of these forests, which are estimated at 125 square miles. In the Bôn and Kubo valleys Mr. Slade has made similar maps of 180 square miles of which 173 square miles are teak forest suitable for reservation. The total length chained was 184 miles.

Katha division.

17. A sub-surveyor lent by Major Hobday was attached to the Divisional Officer's camp throughout the working season and with his aid a map on the scale of 4 miles to the inch has been made of the forests on the east bank of the Shweli, north of Mabein. The total length traversed was 421 miles, which includes road surveys between Tigyaing and Mabein, and the course of the lower part of the Shweli river.

Mandalay division

18. In the Mandalay division Mr. Calthrop traversed 35 miles in the Madaya and 77 miles in the Myitngè forests. The map of the forests leased to the Corporation on the Panlaung and Myittha streams was completed by Mr. Dun, who traversed 176 miles.

Minbu division.

19. In Minbu division an area of 208 square miles, comprising the principal cutch tracts on the Tichaung, has been surveyed by Mr. Bruce with a view to reservation. The length traversed with chain was 144 miles.

Mu division

20. Mr. Murray has surveyed and maped an area of 160 square miles of teak forest in Wuntho territory comprising the tracts drained by the Tinwa, Nabè, Wabo, Kalawpa, Namaw, Nanma, Kanza, and Inga streams; the length of line chained was 157 miles.

Pyinmana division.

21. The surveys made this year were principally in the tract east of the Sittang known as Thitcheikgyi, 350 miles being traversed by Messrs. Copeland, Toussaint, and Thompson.

22. In this division 133 miles were chained along the foot of the Chin Hills.

Yaw division.

(*b*) *Valuation Surveys.*

23. Linear valuation surveys, the details of which are recorded in Appendix C, were made over 6,639 acres distributed among the different divisions as follows:

Summary of valuations.

	Acres.
Bhamo	461
Chindwin	400
Katha	415
Mandalay	2,374
Minbu	82
Mu	1,106
Pyinmana	1,340
Yaw	511
Total ...	6,639

The area counted out was less than last year, the falling off being chiefly in the Pyinmana division, in which the Divisional Officer was engaged on forest settlement work, and in the Chindwin, where it was found that officers could not carry out valuation surveys to any great extent and at the same time exercise proper supervision over girdling.

(*c*) *Working Plans.*

24. The special report on the Western Pyinmana forests (mentioned in paragraph 25 of last year's annual report), embodying the results of valuation surveys, was submitted to the local Government and it has been decided that no further girdling shall be carried out. A similar course has been taken with regard to the Theingôn forests. In other forests the information collected is being carefully recorded and when sufficiently completed will be utilized in framing rough working plans. The general result of these surveys shows that, with the exception of the hitherto little worked forests bordering the Chin Hills in the Yaw and Chindwin divisions, and some portions of the Shan States, girdling has in most places been excessive and the forests cannot continue to stand the drain hitherto imposed on them.

Temporary working plans.

(*d*) *Annual Plans of Operation.*

25. As stated in last year's report annual plans of operations are at present unnecessary.

Annual plans of operations unnecessary.

CHAPTER III.

PROTECTION AND IMPROVEMENT.

(*a*) *Establishment.*

26. Mr. H. C. Hill held charge of the circle from the beginning of the year up to the 13th July, when he was transferred to India as Officiating Inspector-General of Forests, and was relieved by Mr. J. W. Oliver, who remained in charge of the circle to the end of the year.

Controlling staff.

Mr. T. H. Aplin, Deputy Conservator of Forests, returned from furlough and received charge of the Minbu division on the 29th November from Mr. C. E. Muriel, Deputy Conservator of Forests. Mr. Carr, Deputy Conservator of Forests, was relieved of the charge of the Direction division and his duties as Personal Assistant to the Conservator by Mr. C. E. Muriel on the 13th December, and assumed charge of the newly formed Katha division on the same date. Mr. L. A. W. Rind, Deputy Conservator of Forests, was on privilege leave for two months from the 7th September Mr. Blackwell holding charge of the Yaw division during his absence. Mr. C. L. Toussaint was in charge of the Pyinmana division from the 29th July to the 13th November during the absence on privilege leave of Mr. J. Copeland, Deputy Conservator of Forests.

Mr. J. F. Branthwaite was transferred to the Pegu circle on the 28th January and Mr. Bruce, a newly appointed Assistant Conservator, arrived from England on the 6th January, and was placed in charge of the Taungdwingyi subdivision. Mr. O'Bryen, Assistant Conservator, was temporarily transferred to the Mandalay division from December 1889 to April 1890.

Executive staff.

27. Mr. Haslett resigned his appointment on the 29th July. Mr. K. Calderwood arrived from the Forest School on the 9th May. and was placed in charge of the Mandalay revenue subdivision. Mr. C. W. Allan was transferred from the Pegu circle and was posted to the Pyinmana division on the 25th March.

28. A new division called the Katha division, with headquarters at Katha, was constituted on the 13th December 1890. It comprises the whole of the Katha district except that part drained by affluents of the Mu and Mogaung rivers, and the portion of the drainage area of the Shweli that falls within tributary Shan States (all of which previously formed part of the Bhamo division) and the Ruby Mines district, which was hitherto in the Mandalay Forest division. Otherwise the charges remained the same as those detailed in last year's report.

Subordinate establishment.

29. The following table shows the cost of permanent and temporary establishment employed during the year :—

	Sanctioned.	Actually expended.	
	1889-90.	1888-89.	1889-90.
	Rs.	Rs.	Rs.
Permanent.			
Forest and depôt establishment—BI*c*	26,172	18,100	22,588
Office—BI*d*	18,450	14,785	15,937
Temporary.			
AII—Timber and forest produce removed by purchasers ...	8,528	818	1,890
AIII—Drift	4,304	988	3,845
AVI*b*—Elephant establishment	10,596	5,350	8,759
BI*c*—Forest depôt	*Nil.*	895	*Nil.*
BI*d*—Office	10,550	4,754	8,600

Proposals for a revised scale of permanent establishment were submitted in October, but sanction for it had not been received at the end of the year.

(*b*) *General Protection and Breaches of Forest Regulations.*

General.

30. The duty on timber converted for export to Lower Burma was increased during the year from Rs. 10 to Rs. 25 per ton and, in order to carry out the engagements entered into by Government with the lessees of the late King, the export of teak timber in the log by other than licensees was prohibited. Measures were taken to explain the forest rules in regard to the cutting of teak trees to the inhabitants of the Shweli valley in Momeik territory and they have been warned that these rules will in future be enforced. One additional revenue station was notified.

Details of breaches of forest law.

31. Ninety-nine new cases and one which was pending from last year were taken into Court, resulting in convictions in 59 cases, 126 persons being punished; 14 cases resulted in acquittals and 27 cases were pending at the close of the year; 47 minor offences, in which 64 persons were implicated, were compounded under section 62 of the Forest Regulation. Only two undetected cases have been reported, but the returns under this head are necessarily deficient. The record of the year under report shows a considerable increase in forest offences, which is probably due to better supervision being now possible. Numerous cases of cutting green teak were dealt with, but it is believed that this form of offence is decreasing, though in districts like Bhamo and Katha, which contain large tracts which have not yet been brought under control, it cannot all at once be put a stop to.

Bhamo division.

32. Of 40 cases reported, nearly all of which were for felling or being in possession of green teak, 19 were taken into Court and convictions were obtained in 17 cases, two cases resulting in acquittal; 20 cases were compounded by the Divisional Officer, Rs. 205-12-0 being received in compensation; one case of unauthorized felling of teak was undetected.

Chindwin division.

33. There were 17 cases, all connected with floating and revenue station rules, of which four were taken into Court and convictions recorded in each case. The remaining 13 cases were compounded, Rs. 239 being received as compensation.

Katha division.

34. Seventeen cases of felling or being in possession of green teak were reported; of these 12 were taken into Court and convictions obtained in two cases, the other 10 being undecided at the close of the year. In four cases the offenders were, at the request of the Deputy Commissioner, let off with a warning as it appeared that they were quite ignorant of the forest rules. One case was compounded on payment of Rs. 30.

35. A great number of teak trees recently felled, green or girdled, were found in the Shweli forests in Momeik territory; but, as the forest rules had not then been enforced in that State, no action was taken beyond warning the people and explaining the rules to them.

Mandalay division

36. Thirteen cases were reported during the year, of which all but one, in which the offenders were not found, were attempts to evade revenue rules; four cases were taken into Court, and in eight compensation, amounting in all to Rs. 285, was accepted. Of the cases prosecuted convictions were obtained in three cases and one was pending at the close of the year. The undetected case was one of cutting up drift timber.

Minbu division

37. Including one pending from last year, three cases of cutting up licensees' drift logs were tried. A conviction was obtained in one case and the two defendants fined Rs. 300 and Rs. 200 respectively. The second case resulted in an acquittal, and in the third the defendant was convicted in the first instance, but acquitted on appeal to the Commissioner. Two cases of evasion of revenue rules and one of boiling cutch without a license resulted in conviction, while three cases of cutting undersized cutch remained pending. Compensation to the amount of Rs. 80 was accepted in one case, in which eight men were found cutting undersized cutch trees.

Mu division.

38. Three prosecutions only were reported. In the first case, in which 22 persons were found cutting cutch trees for firewood, a conviction was obtained, but the judgment was subsequently reversed owing to an informality in the proceedings. In the other two cases, which were of cutting green teak, no fines were inflicted, but the timber was confiscated.

Pyinmana division.

39. Of 12 cases, all of infringement of rules regarding cutch, taken into Court six cases resulted in convictions, 36 persons being punished. In four cases, in which 22 persons were tried for collecting cutch for fuel, the Magistrate held that no offence had been proved and acquitted the accused, and two cases were pending at the close of the year.

Yaw division.

40. There were 39 new cases during the year, of which 26 were brought into Court and resulted in the conviction of 47 persons concerned in 20 cases, and the acquittal of six persons concerned in six cases. Eleven cases were pending at the end of the year and two were compounded. Of the cases reported nine were cases of cutting green teak, 19 infringment of rules regarding cutch-boiling, and 11 cases in connection with drift timber.

(c) *Forest Fires.*

Fires in teak forests

41. Forest fires prevailed generally, and all teak forests are believed to have been burnt through, except in the Pyinmana division, where very large areas are reported to have escaped. In this division Mr. Copeland warned the villagers and employés of

the Corporation to be careful in preventing the spread of fire when burning their taungyas or fire-protecting timber depôts, but he attributes the immunity from fire more to the early breaking of the monsoon than to any action on his part. Elsewhere the conditions were not so favourable, and though similar attempts were made in the Katha and other divisions, the result was a failure, and this is likely to be the case till reserves are sanctioned, when systematic fire-protection can be commenced.

Fires in hill forests of oak and chestnut.

42. In the Mogôk valley, in the Katha division, efforts were made to protect 7,680 acres of oak and chestnut forest, with the result that 3,700 acres remained unburnt at the end of the season. Except round the plantations at Mogôk and in the Ingyauk valley, no fire-traces were made, and the season being a very unfavourable one, it was only due to the energy displayed by Mr. Buchanan in repeatedly putting out fires that any measure of success at all was achieved. The villagers are reported to have assisted in putting out fires whenever called on to do so, though the work was not rendered very willingly. The burnt area included 1½ acres of *Pinus longifolia* plantation of 1889, in which 75 per cent. of the plants were destroyed. The blanks have since been re-sown and the area is now fully stocked. In this case the fire spread over the plantation from the adjoining forest. The cost of fire-protection amounted to Rs. 74.

(*d*) *Natural Reproduction.*

Remarks on natural reproduction.

43. The returns received from Divisional Officers generally confirm the remarks made in last year's report. In the Bhamo division and parts of Momeik, where teak is often found associated with evergreen forest, the dense undergrowth generally prohibits all reproduction, and where such tracts have been heavily worked the species is now extinct, the stumps only remaining to show what was the former constitution of the forest. Where the growth is less dense the conditions are more favourable, and in parts of the Maingtha, Kun, Thè, and Sekkala forests in Momeik, and on the Paungnetchaung in the south-east of the Bhamo district, the state of reproduction was all that could be desired. Here there appears to have been a general flowering of bamboos some eight or ten years ago, and the result is numerous patches and groves of most promising young teak, which require nothing but fire-protection to develop into most valuable forests. The parent trees appear to have since been removed as large trees are now exceedingly scarce. In the forests near the head of the Myittha river in the Chindwin division the second class trees appear to be largely in excess of the first class, and the same state of things was observed in the Northern Yaw forests.

(*e*) *Experiments and Exotics.*

Bhamo division.

44. Sowings of various kinds of *Eucalyptus* have been made at Bhamo and the following have been raised :—

Eucalyptus globulus	200	*Eucalyptus piperita* ...	32

But it is very unlikely that they will succeed at so low an elevation. One hundred and twenty plants of *Hevea Braziliensis* (Para rubber) were also grown from seed obtained from Mergui.

Katha division. Fruit trees at Bernardmyo.

45. At Bernardmyo the orchard now contains the following fruit trees, all of which are well established :—

Apples	97
Pears	72
Peaches	72
Plums	10
Apricots	4
Cherries	28
Nectarines	18
Walnuts	28

A further small consignment of fruit trees was delayed in Calcutta and it is unlikely that any of the plants can be resuscitated. Attempts to graft on to

indigenous stocks proved unsuccessful. At Mogôk 18 apple trees, 5 olives, and 3 figs are still in the nursery, and will be put out during the present rains.

Pinus longifolia.

46. *Pinus longifolia* thrives well both at Bernardmyo and Mogôk. A small plantation of ¼ acre has been made at Bernardmyo, and two patches, aggregating 2 acres, have been planted out in the proposed reserve at Mogôk. One of these was burnt through and 75 per cent. of the plants destroyed, but it has since been re-sown and is now fully re-stocked. One thousand and one hundred young plants in the nursery at Bernardmyo and 850 at Mogôk are still available for planting out, and it is intended to utilize them in filling up blanks in the oak and chestnut forests round Mogôk.

Deodar.

47. These still continued very healthy and most of them are now ready to transplant. The later sowings failed to germinate, but fresh seed has since been obtained. There are 620 plants alive, the largest being 2 feet high

Abies Smithiana and *Abies Webbiana.*

48. There are large numbers of these both at Bernardmyo and Mogôk. At Bernardmyo *Abies Smithiana* is doing fairly well and some are fit to transplant, but *Webbiana* makes no progress. At Mogôk both species appear very sickly; the elevation is too low for them and it is useless to experiment with them further.

Pinus excelsa.

49. This species is growing well at Bernardmyo and seems likely to succeed, but at Mogôk the plants continue sickly.

Pinus Gerardiana.

50. Some sowings made at Bernardmyo have germinated fairly, but the plants are unhealthy and make no progress.

Cupressus torulosa.

51. Of this species 408 plants have come up at Bernardmyo. They are growing vigorously and average 12 inches in height.

Acer oblongum.

52. There are 13 plants of this species at Bernardmyo, but they suffer much from frost in their present situation.

Litsæa zeylanica: Celtis caucasica.

53. Twelve plants of *Litsæa zeylanica* and a number of *Celtis Caucasica* have been planted out at Bernardmyo with *Pinus longifolia.*

Acacia melanoxylon.

54. *Acacia melanoxylon* still survives, but suffers much from frost.

Eucalyptus globulus.

55. A large quantity of these have been raised at Mogôk and Bernardmyo. They are very healthy, but have been allowed to remain too long in the seed-beds.

Other species of *Eucalyptus.*

56. Additional sowings of various species of *Eucalyptus* have been made; the plants are now coming up, and it is intended to utilize them as far as possible for planting in the different stations on the road between Thabeitkyin and Mogôk.

Eucalyptus sowings at Maymyo.

57. Some sowings of various kinds of *Eucalyptus* have been made at Maymyo in the Mandalay division, from which 29 plants of *Eucalyptus citriodora* and 114 of a species believed to be *tereticornis* have been raised. *Eucalyptus* seed has also been distributed to the Superintendent, Shan States, Superintendent, Northern Shan States, and the Deputy Commissioner, Kyauksè.

Expenditure of the year.

58. The total cost of experiments amounted to Rs. 3,166.

(*f*) *Communications and Buildings.*

Roads.

59. The road to Mandalay Forest office was kept in repair at a cost of Rs. 95.

Buildings, original works.

60. The sum of Rs. 16,181 was spent on erecting new buildings and completing those already begun. In the Chindwin division a shingled roof was put on the Forest office at

Alôn and the floor was cemented at a cost of Rs. 2,403, of which Rs. 2,002 were expended during the year under report. In the Katha division an office and dwelling-house combined, estimated to cost Rs. 5,700, was sanctioned, Rs. 1,031 being spent during the year; and a house for a subdivisional office was purchased at Tigyaing for Rs. 800. In the Mandalay division the office was provided with doors and windows, and a cemented floor, at a cost of Rs. 919. In the Minbu division the grass and mat out-houses attached to the divisional office, which were a constant source of danger, were replaced by less inflammable wood and iron structures at a cost of Rs. 1,100, and a subdivisional office was built at Taungdwingyi, costing Rs. 1,500. In the Mu division a forest office and Divisional Officer's quarters, to cost Rs. 4,500, were commenced at Yè-u, Rs. 2,688 being expended. In Pyinmana the temporary thatched roof of the divisional office was replaced by one of shingles, costing Rs. 1,444, and a rest-house was built at Kôntha for Rs. 640. At Pakôkku in the Yaw division an office and dwelling-house combined was completed at a cost of Rs. 8,220. The remaining expenditure was incurred in different divisions on guard huts and other small buildings, costing less than Rs. 200 each.

Repairs to buildings.

61. On repairs Rs. 1,170 were spent, the principal expenditure being in the Bhamo division, where the damage done to the office buildings by a storm cost Rs. 677 to repair. The remainder is made up of petty repairs in different divisions.

Fencing.

62. A sum of Rs. 435 was incurred for fencing compounds and revenue stations in the Chindwin, Minbu, and Pakôkku divisions.

CHAPTER IV.

YIELD AND WORKING.

(a) *Girdling.*

Application for girdling.

63. At the beginning of the working season Messrs. The Bombay Burma Trading Corporation, Limited, applied for 122,500 tons of timber to be girdled as follows:

	Tons.
Pyinmana, east of Sittang	7,500
Pyinmana, Thitcheikgyi	15,000
Chindwin	60,000
Mu	30,000
Mandalay, Pyaungshu	10,000

As there were some three lakhs of girdled trees available in Pyinmana forests, and the quantities applied for in the other divisions were far in excess of the quantities specified in the agreement and beyond what is possible to accomplish with the present staff, it was decided, with the Chief Commissioner's sanction, to girdle up to the following extent only:

	Trees.
Chindwin	40,000
Mu	20,000
Pyaungshu	5,000

Girdlings in the Chindwin division.

65. In the Chindwin division two girdling parties were organized and work was commenced early in December. That under the Divisional Officer, Mr. Slade, started on the Bôn chaung, a feeder of the Myittha, and thence worked northwards into the Yu valley. By the middle of April 16,308 trees had been killed, and as the coolies refused to remain any longer, and Mr. Slade was then too far from his base to obtain fresh labour, work had to be closed. The second party commenced operations in the lower Myittha valley, but owing, in the first instance, to mismanagement on the part of Mr. Blackwell, who was in charge, and subsequently to that officer falling ill and having to take leave, work did not progress at all satisfactorily and only 11,449 trees were girdled in all. Mr. Blackwell was replaced as soon as possible by Mr. Thompson, work being carried on in the meantime by the forester, but before Mr. Thompson could arrive the

whole of the coolies had left and, it being then late in the season, great difficulty was experienced in re-organizing the party. Some 7,000 trees were girdled by the forester during Mr. Blackwell's absence and a portion of this was subsequently inspected by the Officiating Conservator. The principle of girdling only one in every three marketable trees had not been strictly adhered to, but the forest has not suffered thereby as it contains an unusually large proportion of second class trees. The total number of trees girdled in the Chindwin division was 27,757, details of which will be found in Appendix D. The Officiating Conservator is much indebted to Mr. MacCartie, of Messrs. The Bombay Burma Trading Corporation, Limited, who remained with the girdling party after Mr. Blackwell had left and assisted the forester as far as was possible.

Girdlings in the Mandalay division.

66. Mr. O'Bryen was deputed to carry out the girdling in the Pyaungshu forests, but was compelled by illness to return to Mandalay before he had reached the forests and it was only at the very end of the season that another officer, Mr. Allan, could be sent up; the latter commenced work towards the end of April and by the 17th May had girdled 847 trees near the Taungbyauk ferry on the Myitngè, when he also and most of his coolies fell sick and had to return. The work was much impeded by heavy rains.

Girdling in the Mu division.

67. In the Mu division, although he applied early in November, Mr. Murray did not receive the necessary safe conduct from the Wuntho Sawbwa till the 18th January. Girdling was then commenced on the Nanbyan forest and continued, in conjunction with valuations and surveys, through the Tinwa, Nabè, Wabo. Namaw, Nanma, Khansa, and Inga forests. He then returned to Nanbyan, intending to work through the Nankyitha, Maingwun, and Pyaungthwè forests, but while girdling on the Nankyitha he received a letter from the Deputy Commissioner, Katha, directing him to leave Wuntho territory on account of disturbances on the border. A subsequent telegram cancelling this order never reached Mr. Murray, and he accordingly returned to the Yè-u district and continued girdling in the Maingwun forest.

Here work was again interrupted by the withdrawal for over a month of Mr. Murray's escort and by the end of the season only 7,576 trees had been killed. Marketable trees were found to be generally very scarce, and the Namaw, Khansa, and Inga forests yield no trees whatever.

(*b*) Timber removed by Government Agency.

Yaw logs collected and sold.

68. At the commencement of the year there were 288 logs in hand at the Zigat depôt and an additional 119 logs were collected from the Yaw river, making a total of 407. Of these 16 went adrift and 387 were despatched to Rangoon, four remaining in stock. Of those sent to Rangoon three were lost on the road, for which the contractor paid Rs. 90, and the remainder were sold in Rangoon, realizing Rs. 39-12-0 per log, or Rs. 44-10-0 per ton. Payment was not made till after the close of the year. The cost of extraction amounted to Rs. 1,165.

(*c*) Removal of Timber by Licensees.

Settlement with Maung Bauk.

69. The agreement with Maung Bauk, mentioned in paragraph 64 of last year's report, was signed on the 21st December 1889. A copy is attached as appendix to this report.

Transfer of Ko Tu's agreement to Hadji Mahomed Hady.

70. Ko Tu has been allowed to transfer his interest in the Mogaung forests to Hadji Mahomed Hady of Moulmein, by whom the forests are now being worked.

Surrender of the Theingôn forests.

71. It having been decided that no more timber can be girdled in the Theingôn forests, the Bombay Burma Trading Corporation, Limited, have given notice that they will surrender their license for that forest on the 1st January 1892.

Disputes as to the boundary of the Pyinmana and Thitcheikgyi forests.

72. The Sawbwa of Mobyè having granted a license to one Maung Pôn of Moulmein to work certain forests on the Paunglaung river, which are claimed by the Corporation as part of their Pyinmana forests, Mr. Toussaint, Assistant Conservator of Forests, was deputed to examine the forests in the Mobyè State and ascertain by local enquiry the boundary of those held by the Corporation. His final report has not yet been received and the question is still undecided. In the meantime Maung Pôn has not been allowed to work, the lease being granted in contravention of the Sawbwa's sanad.

Pyaungshu boundary.

73. A similar dispute arose in regard to the forests which the Corporation allege are included in that leased to them as the Pyaungshu forests. Mr. Calthrop, Deputy Conservator, was deputed to ascertain the precise limits of the latter and the results of his enquiry have been submitted to the local Government.

Outturn of forests worked by licensees.

74. The outturn during the financial year of forests worked by license-holders is shown in the following statement, which includes 1,803 tons sold to Government for public works:—

Licensee.	Forests.		Logs.	Tons.
Messrs. The Bombay Burma Trading Corporation, Limited	Pyinmana ...	Full-sized	62,618	87,601
		Under-sized	7,902	6,725
	Chindwin ...	Full-sized	30,252	26,032
		Under-sized	2,880	1,977
	Mu	Full-sized	5,004	6,274
		Under-sized	554	399
	Theingôn ...	Full-sized	82	102
		Under-sized	112	67
	Pyaungshu ...	Full-sized	464	592
		Under-sized	172	89
	Taungdwingyi ...	Full-sized	1,218	1,485
		Under-sized	312	222
	Total Bombay Burma Trading Corporation, Limited ...		111,770	131,565
Maung Bauk	Forests above Mandalay except Mogaung.	Full-sized	4,828	5,785
		Under-sized	1,877	807
	Total Maung Bauk ...		5,705	6,592
Hadji Mahomed Hady.	Mogaung forests ...	Full-sized	2,479	2,678
		Under-sized	1,547	737
	Total Hadji Mahomed Hady ...		4,026	3,410
	GRAND TOTAL REMOVED BY LICENSEES ...		121,501	141,567

In addition to the above Maung Bauk was allowed to remove free of duty as part of the outturn of 1889 1,027 old drift logs that had passed Mandalay prior to the 31st December 1888.

Outturn from forests in Chindwin and Pyinmana.

75. The outturn of the different forests in the Chindwin and Pyinmana divisions is given below.

Division.	Forest.	Logs.
Chindwin ...	Patolôn	3,400
	Taungdwin	2,836
	Myittha	4,620
	Palusawa, Nantabin, Nanzaleiu	1,722
	Mawlaikgyi	2,200
	Mawku	1,140
	Yu	6,152
	Konaw, Makat	448
	Kodan	420
	Nankamu	400
	Total ...	23,338
Pyinmana ...	Yeni	9,294
	Myinbyin	12,885
	Yônbin	12,517
	Palwe	6,267
	Ngalauk	13,035
	Taunguyô	4,280
	Pozaungtaung	3,855
	Kaing	4,854
	Yanaungmyin	230
	Paunglaung	4,528
	Total ...	70,720

The Chindwin return includes logs neaped and in transit, and consequently does not agree with the total logs extracted.

Short outturn from Theingôn forests.

76. In the forests worked by Messrs. The Bombay Burma Trading Corporation, Limited, the minimum outturn contracted for was not obtained from the Theingôn forests, which only produced 97 tons; but the total extracted from all forests was largely in excess, the outturn from the 1st January to the 31st December 1889, being 129,102 tons.

Short outturn from forests worked by Maung Bauk and Hadji Mahomed Hady.

77. Both Hadji Mahomed Hady and Maung Bauk failed to fulfil their obligations, the quantity extracted by the former up to the 31st December being less than the contract minimum by 875 tons and that extracted by the latter no less than 11,156 tons short.

The question as to the enforcement of the penalties for short outturn has been submitted to the Chief Commissioner for orders.

Settlement with Mr. Darwood and U Ka Wi.

78. The contract with Mr. Darwood and U Ka Wi, alluded to in paragraph 65 of last year's report, was not concluded* till after the close of the year, but work was commenced in June and the following quantities extracted :—

	Logs.	Tons.
Full-sized	188	210
Under-sized	86	56
	274	266

on which Rs. 2,940-8-0 revenue is due. Excluding the logs made over to Maung Bauk free, which were estimated to contain 1,200 tons, the total quantity extracted by lessees and by Mr. Darwood and U Ka Wi during the year 1889-90 was as follows:

Summary of outturn by licensees.

	Tons.
Messrs. The Bombay Burma Trading Corporation, Limited ...	131,565
Maung Bauk	6,592
Hadji Mahomed Hady	3,410
Mr. Darwood and U Ka Wi	266
Total ...	141,833

or 45,003 tons in excess of the outturn of the previous year. This increase is chiefly due to favourable floods in the Chindwin and Pyinmana forests.

*A copy of the contract will be found attached to this report.

(d) REMOVAL OF TIMBER AND PRODUCE BY LOCAL PURCHASERS.

(1) *Timber.*

Outturn in timber removed by local purchasers.

79. The timber extracted by local traders and brought to revenue stations is shown in the following statement:—

Division.	Teak.	Other reserved woods.	Unreserved woods.	Firewood brought to Mandalay.	Charcoal.	Revenue.
	Tons.	Tons.	Tons.	Tons	Tons.	Rs.
Bhamo	2,758	...	270	...	92	8,670
Chindwin	437	...	3,102	...	5	4,714
Mandalay	30,597	614	3,818	21,657	1,377	1,19,643
Minbu	7	...	47	...	1,274	413
Mu	424	1	216	106	...	1,584
Pyinmana	2,017	19	882	...	158	12,563
Yaw	5	...	...	...	...	26
Duty on timber	...	...	...	...	...	...
Exported to Lower Burma ...	...	...	...	...	...	17,844
Payments made by licensees ...	...	...	...	...	...	14,42,519
Total ...	37,140	634	8,335	21,763	2,906	16,07,976

Compared with the previous year there has been a slight decrease in the quantity of teak extracted and an increase in unreserved woods, firewood and charcoal. The former was to be expected as the principal buildings in Mandalay and other large towns have been completed; the latter is due not so much to increased consumption as to the better arrangements for the collection of duty.

The amount paid by lessees includes Rs. 37,561 paid by Ko Tu on account of short outturn from the Mogaung forests during the year 1888 and Rs. 21,225 paid by Messrs. The Bombay Burma Trading Corporation, Limited, for short outturn during the same year from the Theingôn forests. Payment for short outturn from the Mu forest was not exacted, the rainfall in that part of the country having been deficient. In the Pyaungshu forest the licensees were allowed to count as part of 1888 timber logs extracted prior to the 1st April 1889, which brought up the outturn to over the contract minimum.

(2) *Minor Forest Produce.*

Outturn in minor forest produce.

80. The outturn from minor forest produce continues to show a satisfactory increase, the total revenue being Rs. 1,67,114, or Rs. 78,840 better than that of the previous year. The following statement exhibits the details of extraction:—

Division.	Bamboos.	Canes.	Cutch.	Rubber.	Wood-oil and black varnish.	Shaw fibre.	Terminalia bark.	Miscellaneous.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Bhamo ...	811	152	120	78,799	10	...	...	...	79,892
Chindwin ...	9,260	2,112	280	3,747	404	...	...	...	15,803
Katha	...	...	340	...	...	...	...	...	340
Mandalay ...	14,706	362	1,140	..	244	...	..	..	16,472
Minbu	76	...	23,280	.	96	76	204	94	23,916
Mu	3,269	1	1,940	...	1,350	...	...	8	6,568
Pyinmana ...	308	10	13,560	...	358	...	6	8	14,250
Yaw	...	...	10,140	...	...	...	...	...	10,140
Total ...	28,430	2,637	50,800	82,546	2,462	76	300	110	1,67,361

Add—	Rs.	
Credited compensation for offences compounded, Yaw	6	96
Credited wrongly under *Ma*, India-rubber licenses, Chindwin ...	90	
		1,67,457
Deduct—		
Wrongly charged to *Vc*, cutch, Katha	340	348
Transferred by the Comptroller from *IIe*, Minbu	8	
Total *IIc* and *IIe* (Form 58) ...		1,67,114

Only seven licenses to trade in rubber were issued in the Bhamo division and nine in the Chindwin division; the quantity extracted from the latter still continues very small and, as stated in last year's report, it is probable that a considerable portion finds its way into Assam. In the Bhamo division the outturn fell short of what was expected, disputes have taken place between the principal Chinese traders and it is believed that large quantities are being held back pending a settlement of the case.

The revenue from cutch was less than was anticipated owing to the principal forests in the Magwe district having been closed to boilers.

(e) Summary of Outturn.

Total outturn.

81. Exclusive of timber and produce not brought to revenue stations, regarding which no statistics are available, the outturn of the Upper Burma forests was as follows:

How extracted.	Teak.	Other reserved woods.	Unreserved woods.	Firewood and charcoal.	Total.	Minor forest produce.
	C. feet.	C. feet.	C. feet.	C. feet.	C. feet.	Rs.
By Government agency ...	16,469	925	...	...	17,394	
" licensees ...	70,91,729	...			70,91,729	
" local purchasers	18,56,997	31,677	4,16,733	12,33,449	35,38,856	1,67,361
" free grants	...	...	...	...	...	...
Total ...	89,65,195	32,602	4,16,733	12,33,149	1,06,47,979	1,67,361

(f) Drift.

Drift operations.

82. The balance on hand at the beginning of the year was 577 logs; 7,762 were brought to depôt, making a total of 8,339 logs. Of these 4,725 were made over to owners, 1,217 were transferred to Government, 385 drifted away, and 2,012 remained on hand at the close of the year. The revenue collected amounted to Rs. 12,041 and the cost of the operations was Rs. 11,910. Six hundred and forty logs of timber transferred to Government account remained unsold at the close of the year.

(g) Exports.

Exports of converted teak.

83. During the year 1,305 tons of converted teak timber were shipped to Lower Burma, of which 343 tons were in the form of byats and the remainder scantling and planks. Revenue at the rate of Rs. 10 per ton was levied on 994 tons and at Rs. 25 per ton on 311 tons.

CHAPTER V.

Financial Results.

General results.

84. The revenue and expenditure of the year compared with that of the three previous years is given below.

Year.	Revenue	Expenditure.		Surplus.
	Rs.	Rs.	Rs.	Rs.
1886-87 ...	1,08,074		2,188	1,05,886
1887-88 ...	2,96,876	A 44,218 B 76,934	1,21,152	1,75,724
1888-89 ..	15,79,928	A 6,33,910 B 1,51,219	7,85,129	7,94,799
1889-90 ..	18,06,069	A 86,394 B 1,87,405	2,73,799	15,32,270

The revenue includes Rs. 58,786 paid by licensees on account of short outturn during the year 1888, but similar claims for the year 1890, amounting in all to Rs. 1,91,017-7-5, remained unadjusted at the close of the year.

Explanation of receipts.

85. The receipts from timber worked by Government agency show a falling-off of over Rs. 77,000, due to a decreased outturn and to sale-proceeds of the timber worked out not having been realized before the close of the year. Payments made by licensees show an increase of Rs. 2,01,193 as follows:

	Rs.
Messrs. The Bombay Burma Trading Corporation, Limited	78,852
Maung Bauk	54,848
Hadji Mahomed Hady	68,498
Total ...	2,01,193

The revenue from timber consumed locally amounted to Rs. 1,36,204, showing a slight increase of Rs. 4,584 over that of the previous year, and the duty levied on converted timber exported to Lower Burma increased from Rs. 5,151 in 1888-89 to Rs. 17,844 in 1889-90, of which Rs. 4,794 only represents the enhanced rate of duty.

The revenue from firewood and charcoal was nearly twice as much as in the previous year, that from bamboos also shows a satisfactory increase, and under minor forest produce the receipts have been more than doubled, chiefly owing to larger quantities of rubber having been extracted. The receipts on account of drift timber have also increased; but, in order to show the true results of the year's working, the revenue must be increased by salvage charges on 1,435 logs recoverable when the logs are handed over to owners and by the value of 640 logs, which have been transferred to Government account.

Miscellaneous revenue shows a decrease of Rs 3,068, due to fewer new property marks having been registered.

Explanation of disbursements.

86 The expenditure under A, Conservancy and works, amounted to Rs. 86,394. It cannot generally be compared with that of the previous year as the latter included heavy items which are not likely to recur; while, on the other hand, the payments made in regard to measuring licensees' timber, girdling, and other matters did not cover a full year's working. An increase of Rs. 6,139 under III, drift operations, is due to a second steam-launch having been employed on this work. Rupees 16,900 were spent on the purchase of elephants against Rs. 27,000 in the previous year, and buildings cost Rs. 16,181, or Rs. 7,733 less than in 1888-89. The remaining items under A call for no explanation. The expenditure under B, Establishment, was Rs. 1,87,405, or Rs. 36,186 more than in the previous year, the increase being distributed among nearly all subheads.

Financial results division by division.

87. The following table shows the revenue and expenditure of each division after allotting as nearly as possible the collections on account of timber and produce to the divisions producing them :—

Division.	Revenue.	Expenditure.	Surplus	Deficit
	Rs.	Rs.	Rs.	Rs.
Bhamo	2,46,849	35,455	2,10,894	...
Chindwin	2,95,054	43,514	2,51,539	...
Katha	84,854	18,044	66,810	...
Mandalay	96,305	43,126	53,179	...
Minbu	50,276	33,927	16,349	...
Mu	76,433	28,102	48,331	...
Pyinmana	9,41,246	44,158	8,97,088	..
Yaw	15,375	27,472	.	12,097
Direction	177	Nil	177	...
Total ...	18,06,069	2,73,799	15,32,270	...

CHAPTER VI.

GENERAL REMARKS.

Escorts.

88. Although it is now possible in most districts to travel along frequented roads without escorts, they could not be dispensed with in the forest, and all officers had to be provided with police guards The Magwe district and parts of the Bhamo district were in too unsettled a condition to admit of the forests being examined at all, and in the Katha district guards had to be refused for a short time. Otherwise escorts have in all cases been readily provided, and the assistance rendered in this respect by District Officers and Military Police Commandants has much facilitated the work of the department.

Field work. Services of officers.

89. *Bhamo division.*—In the Bhamo division, owing to Mr. O'Bryen's illness, Mr. Palmer had to work single-handed during the greater part of the season and, moreover, was not allowed to enter what are believed to be the most important forests of his division. He has nevertheless covered a good deal of ground and added materially to our knowledge of the forests.

In the Chindwin division very heavy girdling operations were projected and, though much hampered by difficulty in obtaining supplies and transport for his large camps, Mr. Slade by carefully considered arrangements carried out his own portion of the work in a most creditable manner. His assistant, Mr. Blackwell, thought fit to depart from the instructions he had received and wasted the most valuable part of the season in marching his camp to the head of the Myittha valley. He then fell sick and had to go on leave, practically without having accomplished any work. Had it not been for this the full season's programme would have been carried out. Mr. Blackwell was succeeded by Mr. Thompson, who, by continuing girdling work to the very end of the hot season, was able in a great measure to make up for lost time.

The new Katha division has been organized by Mr. Carr, who also did an excellent season's work in exploring the forest on the Shweli in Momeik territory.

In the Mandalay division, notwithstanding increased revenue and accounts work, Mr. Calthrop was able to spend a considerable part of the dry season examining the Madaya and Myitngè forests, and carried out an enquiry regarding the boundary of the Pyaungshu forests.

The office establishment of the Minbu division again broke down, and this and timber-measurement work prevented Mr. Aplin from undertaking any detailed forest exploration. In the Taungdwingyi subdivision nothing could be done on account of the unsettled state of the country and Mr. Bruce, who was nominally placed in charge, was employed in the examination of cutch tracts in the Minbu district, and, though he did not commence till late in the year, he has turned out a good season's work.

In the Mu division, although delayed in the first instance for want of a safe conduct to Wuntho and subsequently detained a whole month at Ye u waiting for an escort, Mr. Murray has again done excellent work, his surveys covering not much less ground than those of last year, although carried out in addition to girdling.

The Officiating Conservator has every reason to be satisfied with the work done in the Pyinmana division by Mr. Copeland and his assistant Mr. Toussaint. The former was engaged with Major Eyre on forest settlement work till well into the rains, and the latter carried out the examination of the Mobyè and Thitcheikgyi forests.

In the Yaw division Mr. Rind did a long season's work and, although owing to want of practice his surveys did not cover so large an area as they otherwise might, he deserves credit for remaining at work in spite of repeated attacks of fever.

Both Mr. Carr and Mr. Muriel, who succeeded him in charge of the Direction division, have afforded the Officiating Conservator valuable assistance, Mr. Muriel relieving him of nearly all office work between December and June.

90. Mr. Buchanan has again done good service in the Ruby Mines subdivision. Mr Allan was attached to the circle towards the close of the year and carried out a certain amount of girdling in the Pyaungshu forest under rather trying circumstances. Mr. Dun completed the survey and examination of the Theingôn forests, besides counting all girdled trees, and though through a misunderstanding he has adopted a wrong classification in his valuation surveys, which somewhat detracts from their value, his work is otherwise very creditable. Mr. Calderwood deserves praise for his careful management of the Revenue subdivision at Mandalay, which has resulted in a considerable increase in receipts, and Mr. Lane-Ryan, in charge of the Tigyaing subdivision, has worked satisfactorily.

Services of Sub Assistants.

91. The subordinate forest establishment has not generally been favourably reported on. In the Mandalay division a number of men employed in the revenue station had to be dismissed, and in the Minbu division a recently appointed ranger was dismissed and subsequently sentenced to nine months' rigorous imprisonment for extorting money from cutch-boilers.

Subordinate forest establishment.

92. Office establishments have worked generally well, with the exception of those in the Mandalay and Minbu divisions, in the *personnel* of which considerable changes had to be made.

Office establishments.

93. Messrs. Rind, Palmer, Carr, Calthrop, Toussaint, Blackwell, O'Bryen, Thompson, Allan, Dun, and Calderwood all suffered more or less severely from fever. The health of the remaining officers was good.

Health of officers.

94. The steam-launch *Ranger* was employed on drift work between Pakôkku and Bhamo up to the 6th August 1889, when she was lent for transport operations in connection with the Chin expedition. The launch *Dacoit* was transferred to the Forest Department in place of the *Ranger* on the 1st September 1889 and was employed collecting drift in the Mu division for a month, and for the rest of the year on revenue and drift work in the Bhamo and Katha divisions.

Steam-launches.

The launch *Thunallah* was fitted with a cabin at a cost of Rs. 480 and further repairs cost Rs. 359. She was made available for use on the 5th July 1889, and was employed on drift work in the Yaw, Chindwin, and Minbu divisions up to December, when she was placed under the orders of the Deputy Conservator of Forests, Mandalay, for revenue work.

95. During the year 15 animals were purchased at Moulmein at a cost of Rs. 16,900, but one was stolen *en route* near Thatôn, reducing the number actually received to 14. Four elephants and the calf mentioned in last year's report died during the year, leaving a balance of 39 animals at the close of the year. Of these two are loose, one in Pyinmana and the other in Chindwin, but there is every hope of their recapture.

Elephants.

96. The Officiating Conservator left Mandalay in December and starting from Myadaung crossed to Mabein in Momeik territory, and thence proceeded through the forests on the east bank of the Shweli to Katha; from Katha he went to Mogaung, inspecting the forests in the Ledan and Namyin valleys. Returning to Katha he went by steamer to Pakôkku and thence inspected the forests between Yawdwin and Gangaw. From the latter place he went down the Myittha Valley to Kalewa, which was reached on the 30th April. Then travelling from Kalewa by steamer to Thabeitkyin, he made a brief inspection of the experimental plantations and proposed reserves in the Ruby Mines district, and returned to headquarters on the 31st May.

Conservator's tour.

97. The sale of timber worked out by Government from the Yaw was again undertaken by Mr. Popert, Conservator of Forests, Pegu Circle, for which and for other assistance rendered by the officers of that circle the thanks of the Officiating Conservator are due.

Help afforded by officers of the Pegu circle.

MANDALAY:
The 4th July 1890.

J. W. OLIVER,
Offg. Conservator of Forests.

BENGAL SECRETARIAT LIBRARY.

APPENDICES.

ANNUAL FORM NO. 49.—[PRESCRIBED].—*Area of Protected Forests for 1889-90.*

Division.	Range.	Civil district or territory.	Name of forest.	Area on 1st April 1889.		Added during the year.	Excluded or transferred to other heads.	Area on 1st March 1890.		No. and date of notification of addition or transfer.	Remarks.
				Acres.	Equivalent in square miles	Square miles.	Square miles.	Acres.	Equivalent in square miles.		
Bhamo	Sinbo ...	Bhamo ...	Mangin ...	...	...	41	...	...	41	...	Called Sinbo forests in last year's report.
			Nokcho ...	...	...	...	...	...	...	...	
			Mampwa ...	Unknown	Unknown	...	...	Unknown	Unknown	...	
			Uya-Hatha ...	...	...	24	...	...	24	...	
	Mogaung ..	Do. ...	Namyin, East and West ...	...	230	...	166	...	64	Notification No. 37, dated 27th February 1890.	Corrected after inspection. Last year entered as Mohnyin.
	Tapaing ...	Do. ...	Tapaing.. ...	Unknown	Unknown	...	...	Unknown	Unknown	...	
	Molè ...		Molè								
	Shwegu ...		Moyu, Nampa Nansin, Sinkan.								
	Kaukkwe ...		Kaukkwe and Mozit ...								
Chindwin ...	...	Upper Chindwin ...	Uru	Unknown	Unknown	...	...	Unknown	Unknown	...	
			Nanthamyit ...								
			Nankamu ...								
			Henu								
			Sunda								
			Yu								
			Tilaung	...	57	...	...	...	210	...	Proposed Yu reserve.
			Dathwechauk ...	...	83	...	...	...			
			Other tributaries ...	...	70	...	...	...			
			Mawlaikgyi ...	...	63	...	...	...	149	...	Proposed Kindat reserve.
			Mawku	...	86	...	...	...			
			Kodaw	Unknown	Unknown	...	...	Unknown	Unknown	...	Estimated.
			Myittha	...	375	...	125	...	250	...	
			Mauk and Kunsè ...	...	...	125.	...	...	125	...	To be proposed as the Mauk reserve.
			Patolôn	..	600	...	...	...	600	...	Estimated.
			Mahamyaing ...	Unknown	Unknown	...	...	Unknown	Unknown	...	
			Thingaodn ...	...	100	...	...	...	100	...	Estimated.
			Bon	...	...	114	...	...	114	...	
			Nansipet ...								
			Nansiduk ...								
			Nankyinlaw ...								
			Nanjaman ...	...	...	59	...	...	59	...	
			Nansamin ...								
			Pyaungbôk ...								
			Taungdwin ...	...	262	...	...	...	262	Notification No. 151, dated 23rd November 1888.	Proposed reserve.
			Nantabin ...	...	60	...	...	...	180	Notification No. 139, dated 23rd November 1888.	Proposed Matu reserve.
			Paluswa ...	...	84						
			Nanzalein ...	...	36						

ANNUAL FORM NO. 49.—[PRESCRIBED].—*Area of Protected Forests for 1889-90*—concluded.

Division.	Range.	Civil district or territory	Name of forest	Area on 1st April 1889.		Added during the year.	Excluded or transferred to other heads.	Area on 1st March 1890.		No. and date of notification of addition or transfer.	Remarks.
				Acres.	Equivalent in square miles.	Square miles.	Square miles.	Acres.	Equivalent in square miles.		
Katha	Meza ...	Katha district ...	Petsut Auktaw	...	74	...	...	...	74	Notification No. 37, dated 27th February 1890.	Transferred from Bhamo division.
			Mawhun	...	42	...	...	...	42		Includes Namu and Kwepôn.
			Meza chaung	...	323	13	...	...	336		Includes Meza and Taungchaung.
	Ruby Mines sub-division.	Ruby Mines district	Kyayattat	Unknown	Unknown	...	...	Unknown	Unknown		
			Nyaungtauk	...	5	...	...		5		
			Shwe-udaung	Unknown	Unknown	...	...	Unknown	Unknown		
			Wapyudaung	...	6	...	...	...	6	...	Transferred from Mandalay division.
			Sagadaung	Unknown	Unknown	...	...	Unknown	Unknown		
	Shweli ...	Momeik ...	Sekkala	...	...	10	...	...	10		
			Nampan	Unknown	Unknown	...	...	Unknown	Unknown		
			Upper Shweli	Do.	Do.	...	...	Do.	Do.		
		East Shweli ...	Maingtha chaung... ...	...	...	600	...	...	600	...	Transferred from Bhamo division.
			Nahan								
			Budaung								
			The								
			Kun								
			Magyi								
			North Nampaw	...	...	21	...	...	21	...	Transferred to Bhamo division.
			South Nampaw	Unknown	Unknown	...	...	Unknown	Unknown		
Mandalay	...	Yamèthin and Meiktila	Myittha	...	200	...	...	...	200	...	
		Kyaukse ...	Ponlaung	...	250	...	...	...	...	...	
			Zawgyi	...	100	...	...	...	100	...	
		Mandalay and Shan States.	Myitnge, Dotawadi, or Pyaungahu.	...	1,000	...	...	...	1,000	...	
			Madaya	...	200	...	...	...	200	...	
Minbu	Taungdwingyi ...	Magwe ...	Yabe								
			Kyaukmigyaung								
			Baukôn	...	250	...	...	...	250	...	
			Kummôntaung								
			Ngamin								
			Sadông	...	160	...	...	...	160	...	
			Yimale								
			Sun								
			Lebu	...	300	...	...	...	300		
			Yin								
			Pin	Unknown	Unknown	...	...	Unknown	Unknown	...	
	Sidôktaya ...	Minbu ...	Mon	...	960	...	...	...	960	...	
			Man		200	...	...	...	200	...	
			Salin	Unknown	Unknown	...	...	Unknown	Unknown	...	

Mu		Ye-u	Yebin	Unknown	60				60	Notification No. 88, dated 3rd July 1889.	Proposed reserves.
			Pyaungthwe		70				70		
			Maingwun		60				60		
		Wuntho	Sareiktha		15				15	Notification No. 54, dated 10th April 1890.	
			Nankyitha		107				107		
			Nanbyan		33				33		
			Tinwa			24			24		
			Nabe			13			13		
			Wabo			16			16		
			Kalawpa			8			8		
			Nammaw			18			18		
			Nama			32			32		
			Nanyonga	Unknown	Unknown		Unknown	Unknown			
			Khansa			26			26		
			Inga			23			23		
			Laga	Unknown	Unknown		Unknown	Unknown			
			Tagyaing	Do.	Do.		Do.	Do.			
		Katha	Sinlin								
			Daungyo		48				48		
			Thaw		60				60		
		Shwebo	Hnetpyittaung	Unknown	Unknown		Unknown	Unknown			
Pyinmana	Lewe	Pyinmana	Yeni		80				70	Notification No. 150, dated 12th November 1888.	Proposed reserves.
			Myinbyin		185				170		
			Yonbin		130				125		
			Yanaungmyin		15				15	Notification No. 126, dated 17th September 1889.	
			Kaing		48				45		
			Padwe		100				100		
			Ngalaik		140				140	Notification No. 150, dated 12th November 1888.	
	Taungnyo		Taungnyo		90				85		
			Pozaungtaung		80				80	Notification No. 136, dated 17th September 1889.	
			Paunglaung	Unknown	Unknown	200			200		
			Simthe	Do.	Do.		Unknown	Unknown			
	Yamèthin	Yamèthin	Myohla		20				20		
			Shwemindin		20				20		
			Kyinyu		20				20		
Yaw		Pakôkku	Kyaw		150				150		
			Yaw		400				400		
			UNCLASSED FORESTS.								
Katha	Ruby Mines sub-division.	Ruby Mines district	Chinitaung	1,000	2			1,000	2	Notification No. 35, dated 3rd May 1888.	Proposed reserves.
			Petawé	800	1			800	1		
			Bamôn	960	2			960	2		
			North Mogôk	2,800	4			2,800	4		
			Kathé	1,000	2			1,000	2	Notification No. 60, dated 14th June 1888.	
			Kyatpyin	1,440	2			1,440	2		
			Bernardmyo	14,388	22			14,388	22	Notification No. 137, dated 16th October 1888.	
			Total	22,388	35			22,388	35		

ANNUAL FORM NO. 50 [PRESCRIBED].—*Register of Breaches of Forest Rules during the year 1889-90.*

Forest division.	Cases pending from 1888-89.	New cases of the year. Injury to forest by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.	Total cases.	Disposed of during the year. Convictions. Cases.	Convictions. Persons.	Acquittals. Cases.	Acquittals. Persons.	Total. Cases.	Total. Persons.	Cases pending at close of the year.
A. Bhamo	...	...	19	...	...	19	19	17	17	2	2	19	19	...
A. Chindwin	...	...	2	...	2	4	4	4	4	...	...	4	4	...
A. Katha	...	...	12	...	...	12	12	2	2	...	...	2	2	10
A. Mandalay	...	...	...	...	4	4	4	3	3	...	...	3	3	1
A. Minbu	1	...	6	...	2	8	9	5	6	1	1	6	7	3
A. Ma	...	...	3	...	...	3	3	2	11	1	22	3	33	...
A. Pyinmana	...	...	2	...	10	12	12	6	36	4	22	10	58	2
A. Yaw	...	...	33	...	4	37	37	20	47	6	6	26	53	11
Total A	1	...	77	...	22	99	100	59	126	14	53	73	179	27
B. Bhamo	...	...	7	...	13	20	20	20	20	...	...	20	20	...
B. Chindwin	...	...	4	...	9	13	13	13	20	...	...	13	20	...
B. Katha	...	...	1	...	...	1	1	1	1	...	...	1	1	...
B. Mandalay	...	...	...	...	8	8	8	8	11	...	...	8	11	...
B. Minbu	...	...	1	...	...	1	1	1	8	...	...	1	8	...
B. Mu	...	...	...	...	...	...	...	...	...	...	...	...	...	...
B. Pyinmana	...	...	1	...	1	2	2	2	2	...	...	2	2	...
B. Yaw	...	...	2	...	...	2	2	2	2	...	...	2	2	...
Total B	...	...	16	...	31	47	47	47	64		...	47	64	...
C. Bhamo	...	...	1	...	...	1	1	...	...	...	...	...	...	...
C. Chindwin	...	...	...	...	...	...	...	...	...	...	...	...	...	...
C. Katha	...	...	...	...	...	...	...	...	...	...	...	...	...	...
C. Mandalay	...	...	1	...	...	1	1	...	...	...	...	...	...	...
C. Minbu	...	...	...	...	...	...	...	...	...	...	...	...	...	...
C. Mu	...	...	...	...	...	...	...	...	...	...	...	...	...	...
C. Pyinmana	...	...	...	...	...	...	...	...	...	...	...	...	...	...
C. Yaw	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total C	...	...	2	...	...	2	2	...	...	...	...	...	...	...
Total A	1	...	77	...	22	99	100	59	126	14	53	73	179	27
Total B	...	...	16	...	31	47	47	47	64	...	...	47	64	...
Total C	...	...	2	...	...	2	2	...	...	...	...	...	...	...
GRAND TOTAL	1	...	95	...	53	148	149	106	190	14	53	120	243	27

N. B.—A means cases taken into Court. | B means cases disposed of under section 62 of Upper Burma Forest Regulation. | C means undetected cases.

ANNUAL FORM NO. 51 [PRESCRIBED].—*Area of Forest Tracts protected from Fire during the Dry Season of 1890 (to accompany Report for 1889-90).*

Division.	Forest tract.	Year in which protection commenced.	Area actually protected up to 15th June 1889.	During dry season of 1890.			Cost during the season.	Remarks.
				Area attempted to be protected.	Failures	Actually protected.		
							Rs.	
Katha	Mogôk valley. Proposed reserves. Chinitaung	1889	3,707	1,000	700	300	74	
	Petswe			840	400	400		
	Bamông			960	460	500		
	Kathe			1,080	200	800		
	Kyatpyin			1,440	440	1,000		
	North Mogôk			2,480	1,780	700		
	Total	...	3,707	7,690	3,980	3,700	74	

ANNUAL FORM NO. 52 [PRESCRIBED].—*Area of Plantations for 1889-90.*

Division.	Name of plantation.	Area in acres.				Receipts	Charges	Remarks.
		On 1st April 1889.	Added during the year.	Excluded during the year.	Area on 31st March 1890.	Of the year.		
	Plantations.					Rs.	Rs.	
	Bernardmyo	...	·2	...	·2	...	335	Includes Rs. 30 for fencing.
	Mogôk I (cart-road)	...	·5	...	·5	...	249	
	Mogôk II (Ingyauk)	...	1·5	...	1·5	...		
	Total	...	2·2	...	2·2	...	584	
	Nurseries, experiments, and exotics.							
	Bernardmyo	·25	...	...	·25	...	914	Includes Rs. 50 for fencing.
	Mogôk	·11	...	...	·11	...	337	
	Total	·36	...	...	·36	...	1,251	
	Orchards.							
	Bernardmyo	...	·4	...	·4	...	1,134	
	Total	·36	2·6	...	2·96	...	2,909	

ANNUAL FORM NO. 54 [PRESCRIBED].—*Outturn (in cubic feet, solid) of Timber and Fuel during the year 1889-90 and Agency of Exploitation.*

Division.	Timber in the rough; Logs.					Timber in the rough; Poles.					Sawn or squared timber.					Miscellaneous.					Fuel.					Total.
	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Government.	Purchasers.	Free grantees.	Right-holders.	Total.	Outturn.
	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.	c. ft.
I.—Reserved Forests.—Nil.																										
II.—Protected Forests.																										
Bhamo ...	1,678	290,030	...	...	291,708	...	19,385	...	...	19,385	...	...	...	...	...	...	...	...	...	...	...	4,600	...	...	4,600	315,693
Chindwin ...	3,712	105,919	...	...	109,631	...	98,460	...	...	98,460	...	35,752	...	...	35,752	...	...	...	...	...	...	250	...	...	250	244,093
Katha ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mandalay ...	2,014	1,711,118	...	...	1,713,132	...	352,582	...	...	352,582	...	32,347	...	...	32,347	...	...	...	...	...	...	1,151,699	...	...	1,151,699	3,249,760
Minbu ...	4,960	185,339	...	...	190,299	925	100	...	...	1,025	...	161	...	...	161	...	...	...	...	...	...	63,700	...	...	63,700	255,185
Mu ...	440	359,439	...	...	359,879	...	16,740	...	...	16,740	...	3,064	...	...	3,064	...	...	...	...	...	...	5,300	...	...	5,300	384,983
Pyinmana ...	...	4,853,665	...	...	4,853,665	...	9,416	...	...	9,416	...	30,114	...	...	30,114	...	14,023	...	...	14,023	...	7,900	...	...	7,900	4,915,118
Yaw ...	3,665	1,277,790	...	...	1,281,455	...	...	...	...	...	...	265	...	...	265	...	...	...	...	...	...	...	...	...	...	1,281,720
Direction ...	...	1,427	...	...	1,427	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,427
Total ...	16,469	8,784,727	...	...	8,801,196	925	496,683	...	...	497,608	...	101,703	...	...	101,703	...	14,023	...	...	14,023	...	1,233,449	...	...	1,233,449	10,647,979
III.—Unclassed Forests.—Nil.																										

ANNUAL FORM No. 55. [PRESCRIBED.]—*Satement showing Outturn of Minor Forest Produce during the year 1889-90.*

Division.	Description of produce.	Produce removed or utilized. By Government agency. Quantity.	By Government agency. Value.	By purchasers. Quantity.	By purchasers. Value.	By free grants. Quantity.	By free grants. Value	By right-holders. Quantity.	By right-holders. Value.	Total. Quantity.	Total. Value.	Remarks.
			Rs.		Rs.		Rs.		Rs.		Rs.	
BHAMO	Bamboos ... ... No.	...	...	221,608	811	...	...	...	...	221,608	811	12½ per cent. *ad valorem*.
	Canes ... ... "	...	...	121,230	152	...	...	...	...	121,230	152	
	Cutch ... ... Cauldrons	...	...	6	120	...	...	...	...	6	120	
	Rubber ... ... Viss	...	...	157,599	78,799	...	...	...	...	157,599	78,799	Eight annas per viss.
	Thitai ... ... "	...	...	500	10	...	...	...	...	500	10	100 viss per permit.
CHINDWIN	Bamboos ... ... No.	...	...	4,524,383	9,260	...	...	...	...	4,524,383	9,260	12½ per cent. *ad valorem*.
	Canes ... ... "	...	...	5,135,680	2,112	...	...	...	...	5,135,680	2,112	
	Cutch ... ... Cauldrons	...	...	14	280	...	...	...	...	14	280	
	Rubber ... ... Viss	...	...	7,494	3,747	...	...	...	...	7,494	3,747	Eight annas per viss.
	Kanyin oil ... ... "	...	...	200	4	...	...	...	...	200	4	100 viss per permit.
	Thitai ... ... "	...	...	20,000	400	...	...	...	...	20,000	400	
KATHA ...	Cutch ... ... Cauldrons	...	...	17	340	...	...	...	...	17	340	
MANDALAY	Bamboos ... ... No.	...	...	7,843,452	14,706	...	...	...	...	7,843,452	14,706	12½ per cent. *ad valorem*.
	Canes ... ... "	...	...	555,460	362	...	...	...	...	555,460	362	
	Cutch ... ... Cauldrons	...	...	57	1,140	...	...	...	...	57	1,140	
	Thitai ... ... Viss	...	...	12,200	244	...	...	...	...	12,200	244	100 viss per permit.
MINBU	Bamboos ... ... No.	...	...	15,000	76	...	...	...	...	15,000	76	12½ per cent *ad valorem*.
	Bark ... ... Viss	...	...	14,700	294	...	...	...	...	14,700	294	100 viss per permit.
	Cutch ... ... Cauldrons	...	...	1,160	23,280	...	...	...	...	1,160	23,280	
	Elephant tusks ... ... No.	...	...	2	50	...	...	...	...	2	50	
	Honey ... ... Viss	...	...	30	6	...	...	...	...	30	6	10 viss per license.
	Lime ... ... "	...	...	1,400	28	...	...	...	...	1,400	28	100 viss per license.
	Shaw fibre ... ... "	...	...	7,600	76	...	...	...	...	7,600	76	100 viss per license.
	Thitai ... ... "	...	...	4,800	96	...	...	...	...	4,800	96	100 viss per license.
	Miscellaneous	...	...	...	10	...	...	...	...	...	10	
MU	Bamboos ... ... No.	...	...	1,276,150	3,269	...	...	...	...	1,276,150	3,269	12½ per cent. *ad valorem*.
	Canes ... ... "	...	...	1,000	1	...	...	...	...	1,000	1	
	Cutch ... ... Cauldrons	...	...	97	1,940	...	...	...	...	97	1,940	
	Honey and wax ... ... Viss	...	...	40	8	...	...	...	...	40	8	10 viss per permit.
	Thitai ... ... "	...	...	67,500	1,350	...	...	...	...	67,500	1,350	100 viss per permit.
PYINMANA	Bamboos ... ... No.	...	...	149,539	308	...	...	...	...	149,539	308	12½ per cent. *ad valorem*.
	Canes ... ... "	...	...	13,500	10	...	...	...	...	13,500	10	
	Cutch ... ... Cauldrons	...	...	678	13,560	...	...	...	...	678	13,560	
	Bark ... ... Viss	...	...	300	6	...	...	...	...	300	6	100 viss per permit.
	Honey and wax ... ... "	...	...	40	8	...	...	...	...	40	8	10 viss per permit.
	Thitai ... ... "	...	...	17,900	358	...	...	...	...	17,900	358	100 viss per permit.
YAW ...	Cutch ... ... Cauldrons	...	...	507	10,140	...	...	...	...	507	10,140	
	Total ...	...	...	...	167,361	...	...	...	...	...	167,361	

ANNUAL FORM NO 56 [PRESCRIBED].—*Account of Timber and other Produce cut or collected by Government Agency and brought to Sale Depôts or sold locally during the year 1889-90.*

Particulars.	Number or quantity.	Cubic feet.	Total of each head: Number or quantity.	Total of each head: Cubic feet
ACCOUNT OF GOVERNMENT TIMBER.				
In hand at commencement of the year.				
Mandalay—				
Teak logs	42	500		
Other woods	16	195		
			58	704
Minbu—				
Teak logs	288	11,520		
			288	11,520
Pyinmana—				
Teak logs	31	342		
Sleepers	80	112		
Scantlings	13	22		
			124	476
Yaw—				
Teak logs	65	3,219		
			65	3,219
Total balance ...	...	...	535	15,919
Received in depôt during the year.				
Teak logs (lapsed drift)	1,213	26,795		
Other woods (lapsed drift)	4	28		
Teak logs (confiscated)	200	1,449		
Teak logs (from Yaw forests)	119	5,064		
Thingan logs (from Pyinmana forests)	18	1,350		
Teak logs (rejected by Bombay Burma Trading Corporation, Chindwin logs)	22	400		
Teak logs (collected outside depôt, Chindwin)	115	2,186		
			1,700	37,272
Total ...	...	...	2,235	53,191
Removed by purchasers from depôts.				
Teak logs	1,162	28,448		
Thingan logs	18	1,350		
			1,180	29,798
Used departmentally.				
Teak logs	107	4,115		
			107	4,115
Drifted away				
Teak logs	51	2,572		
			51	2,572
Stolen from depôt.				
Teak sleepers	32	44		
			32	44
Balance in hand at the end of the year.				
Chindwin ... ... Teak logs	182	4,200		
Katha ... ... "	449	9,447		
Mandalay ... ... Teak logs	73	1,524		
Other woods	20	223		
Minbu ... ... Teak logs	4	160		
Mu ... ... "	22	440		
Pyinmana ... ... Teak logs	31	342		
Sleepers	48	68		
Scantlings	13	22		
Yaw ... ... Teak logs	13	236		
			805	16,662
Total ...	...	...	2,235	53,191
ACCOUNT OF DRIFT TIMBER.				
In hand at commencement of the year.				
Bhamo ... ... Teak.	268	4,351		
Mandalay ... ... "	90	2,700		
Minbu .. .. "	133	5,030		
Mu ... ... "	66	2,640		
Yaw ... ... "	20	226		
			577	15,327
Collected during the year.				
Bhamo ... ... Teak.	861	18,194		
Chindwin ... ... "	277	7,496		
Katha ... ... "	13	260		
Mandalay ... ... Teak ...	927	18,592		
Other woods	4	28		
Minbu ... ... Teak.	2,032	117,280		
Mu ... ... Teak ...	2,418	101,420		
Other woods	10	400		
Yaw ... ... Teak ..	325	10,319		
Other woods	1	40		
			7,762	273,860
Total ...	...	...	8,339	289,196
Made over to claimants.				
Teak logs	4,725	176,800		
Transferred to Government account.				
Teak logs	1,213	26,795		
Other woods	4	28		
Went adrift.				
Teak logs	384	10,295		
Other woods	1	40		
			6,327	213,958
Balance at the end of the year.				
Chindwin ... ... Teak.	3	69		
Katha . ... "	13	260		
Mandalay ... ... "	40	1,478		
Minbu ... ... "	238	9,520		
Mu .. .. Teak ...	1,517	61,080		
Other kinds	10	400		
Yaw ... ... Teak	191	2,440		
			2,012	75,238
Total ...	...	...	8,339	289,196

ANNUAL FORM NO. 57 [PRESCRIBED].—*Abstract showing the Value of Timber and other Produce at Sale Depôts for the year 1889-90.*

Description of timber and other produce	On hand at commencement of the year			On hand at the close of the year.			Difference in value.		Remarks
	Number	Cubic feet.	Value	Number	Cubic feet.	Value.	In favour of the year.	Against the year.	
Government Account			Rs.			Rs	Rs	Rs	
Teak logs ...	426	15,590	4,920	724	16,349	5,749	829	...	
Teak scantlings	18	22	20	13	22	15	...	11	
Teak sleepers	80	112	80	48	68	68	..	12	
Other woods	16	195	40	20	223	20		20	
Total ...	535	15,919	5,060	805	16,662	5,852	829	43	

ANNUAL FORM NO. 57A [PRESCRIBED].—*Abstract showing the Value of Live and dead stock for the year 1889-90.*

Description of timber and other produce.	On hand at commencement of the year.			On hand at the close of the year			Difference in value.		Remarks.
	Number.	Cubic feet	Value	Number	Cubic feet	Value	In favour of the year	Against the year.	
			Rs			Rs.	Rs.	Rs.	
Live stock	29*	...	33,010	30	...	45,245	12,235	...	*The elephant calf noticed in last year's report died on the 2nd September 1889.
Buildings	18	...	31,096	19	...	41,616	10,520	...	Number shows only buildings costing over Rs 200, but the cost of all buildings is included in the value.
Dead stock	...	...	18,598	...	...	21,077	2,479	...	This form is prepared by adding value of stock acquired to the value of stock at the beginning of the year less 5 per cent of the latter on account of depreciation.
Total ...	...	...	82,704	...	...	1,07,938	25,234	.	

ANNUAL FORM NO. 58 [PRESCRIBED].—*Summary of Revenue of the different Divisions during 1889-90.*

Budget heads.	Direction.	Bhamo division.	Chindwin division.	Katha division.	Mandalay division.	Minbu division.	Mu division.	Pyinmana division.	Yaw division.	Total.
RECEIPTS.										
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY.	Rs. A. P.	Rs. A. P	Rs. A. P.	Rs. A. P.	Rs. A. P	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P	Rs. A. P.
(a) Timber	.....	.....	.....	.....	.....	90 0 0	.....	.....	3,424 5 10	3,514 5 10
(b) Firewood and charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(c) Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(d) Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(e) Grass and other minor produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—										
(a) Timber	1,755 15 4	75,131 3 6	16,996 6 2	.	2,20,133 6 0	38,758 9 8	69,560 3 7	9,23,581 5 6	2,48,650 1 5	15,96,567 3 2
(b) Firewood and charcoal	.....	.....	.....	.....	11,010 10 8	318 8 0	39 12 3	39 8 0	.....	11,402 6 11
(c) Bamboos	.....	811 0 0	9,260 1 0	.....	14,706 7 7	76 0 0	3,269 11 4	308 6 6	.....	28,431 10 5
(d) Grazing and fodder grass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(e) Other minor produce	.....	79,078 8 6	6,635 10 6	.....	1,746 5 9	23,837 0 0	3,298 0 0	13,942 7 0	10,146 0 0	1,38,683 13 9
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE ..	.....	1,221 0 0	629 6 0	63 0 0	1,296 0 6	5,976 2 0	2,129 1 4	2 4 6	724 8 0	12,041 6 4
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—										
(a) Duty on foreign timber and other forest produce ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(b) Revenue from shared and private forests	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
V.—MISCELLANEOUS—										
(a) Fines and forfeitures	.....	463 12 0	239 0 0	.....	82 9 3	60 0 0	.....	.....	56 0 0	921 5 3
(b) Refunds	101 15 10	157 3 4	32 2 9	0 12 0	51 7 11	103 2 4	9 13 2	0 1 0	.....	456 10 4
(c) Other sources	74 9 6	3,843 1 10	1,358 6 8	1,393 0 6	3,876 0 8	223 3 6	296 1 0	1,371 6 4	908 6 6	14,044 6 6
Total ...	1,932 8 8	1,60,765 13 2	35,151 3 1	1,456 12 6	2,52,003 0 4	69,462 9 6	79,302 10 8	941,245 6 10	2,63,909 5 9	1,806,069 6 6

CALCUTTA:
The 6th June 1890.

J. BRIDGNELL, *Chief Superintendent,*
in charge Forest Account Branch, Comptroller-General's Office.

ANNUAL FORM NO. 58 [PRESCRIBED].—*Summary of Expenditure of the different Divisions during 1889-90.*

Budget heads	Direction.	Bhamo division.	Chindwin division.	Katha division.	Mandalay division.	Minbu division.	Mu division.	Prinmana division.	Yaw division.	Total.
A.—CONSERVANCY AND WORKS.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—										
(a) Timber	.....	.....	.....	.....	.....	1,164 12 0	.....	.....	.....	1,164 12 0
(b) Firewood and charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(c) Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(d) Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(e) Grass and other minor produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FOREST BY CONSUMERS OR PURCHASERS	209 8 0	73 0 4	7,905 6 5	.....	854 5 11	128 6 0	891 8 0	1,823 14 3	24 9 0	11,910 9 11
III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE	1,283 14 7	1,550 2 0	895 10 0	66 10 0	1,773 11 3	2,611 9 4	2,367 7 0	869 9 9	475 9 2	11,910 3 1
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—										
(a) Duty on foreign timber and other forest produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(b) Revenue from shared and private forests	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT.										
VI.—LIVE-STOCK, STORES, TOOLS AND PLANT—										
(a) Purchase of cattle	16,900 0 0	.....	.....	.....	.....	.....	.....	.....	.....	16,900 0 0
(b) Feed and keep of cattle	2,533 0 11	1,322 0 0	1,590 15 6	321 6 2	1,314 9 10	1,178 10 3	791 8 5	1,530 9 8	1,046 14 2	11,619 10 11
(c) Purchase of stores, tools and plants	1,551 15 4	309 12 0	425 12 3	173 9 0	328 15 0	104 0 0	128 8 0	301 9 0	85 1 4	3,409 1 11
VII.—COMMUNICATIONS AND BUILDINGS—										
(a) Roads and bridges	.....	.....	7 8 0	140 0 0	94 12 0	0 12 0	.....	.....	.....	243 0 0
(b) Buildings	.....	766 3 9	2,223 4 1	2,130 9 0	882 3 9	2,613 12 0	2,936 8 6	2,428 8 0	2,230 0 0	16,181 0 4
(c) Other works	.....	252 14 4	179 12 0	292 5 0	325 5 3	0 8 0	.....	9 0 0	.....	1,049 12 7
VIII.—DEMARCATION, IMPROVEMENT, AND EXTENSION OF FORESTS—										
(a) Demarcation	.....	203 8 3	73 0 0	.....	.....	.....	.....	114 14 0	.....	391 6 3
(b) Compensation for land and rights	.....	.....	.....	.....	.....	30 0 0	25 0 9	1,000 0 0	.....	1,055 0 0
(c) Surveys and working plans	7 6 0	708 8 10	794 2 0	75 10 0	1,180 13 0	27 10 8	1,089 10 0	2,027 13 4	202 0 0	6,111 11 10
(d) Sowing and planting	.....	255 10 0	.....	1,291 11 1	1,579 0 0	.....	.....	.....	.....	3,166 5 1
(e) Protection from fire	.....	.....	.....	147 8 0	23 0 0	.....	.....	.....	.....	170 8 0
(f) Other works	.....	.....	71 8 0	.....	.....	.....	.....	.....	.....	71 8 0
IX.—MISCELLANEOUS—										
(a) Refunds	.....	.....	100 0 0	.....	147 0 10	0 6 0	.....	.....	140 0 0	387 6 10
(b) Law charges	.....	.....	.....	.....	.....	.....	.....	2 1 0	0 8 0	2 9 0
(c) Other charges	132 3 6	3 0 0	132 9 0	21 0 0	115 1 0	227 2 5	9 4 0	4 0 0	4 15 0	649 2 11
Total A.—Conservancy and Works	22,618 0 4	5,464 10 9	14,399 9 3	4,648 4 3	8,618 13 10	8,087 8 8	8,239 5 11	10,117 15 0	4,199 8 8	86,393 12 8
B.—ESTABLISHMENT.										
I.—SALARIES—										
(a) Conservators	13,524 3 2	.....	.....	.....	.....	.....	.....	.....	.....	13,524 3 2
(b) Superior officers	8,300 0 0	13,200 0 0	12,220 7 6	3,650 0 0	13,802 10 7	10,443 9 6	7,800 0 0	15,227 3 1	9,300 0 0	93,943 14 8
(c) Subordinate forest and depôt establishments	.....	2,512 10 11	4,330 4 2	84 0 0	4,597 3 4	3,503 8 6	2,073 11 6	3,354 5 6	2,217 11 11	22,583 7 10
(d) Office establishments	7,038 14 6	2,851 11 10	1,796 1 7	853 0 1	4,333 4 5	2,161 14 2	1,371 9 0	2,781 10 11	1,548 8 5	24,536 10 11
(e) Deputation and special allowance	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II.—TRAVELLING ALLOWANCES—										
(a) Conservators	1,448 15 7	.....	.....	.....	.....	.....	.....	.....	.....	1,448 15 7
(b) Superior officers	627 1 9	4,015 4 2	2,173 7 7	1,305 12 5	3,731 7 3	2,922 3 0	1,459 8 0	4,061 12 6	1,465 2 6	22,460 11 2
(c) Subordinate forest and depôt establishments	.....	241 3 0	461 1 2	.....	245 2 11	549 8 8	0 12 0	14 0 0	260 0 0	1,771 11 9
(d) Office establishments	506 11 4	183 15 4	427 1 4	193 12 0	593 15 4	180 11 0	113 8 0	575 2 1	75 0 9	2,849 13 2
III.—CONTINGENCIES—										
(a) Stationery	.....	0 10 0	.....	.....	.....	2 6 6	.....	.....	0 4 0	3 4 6
(b) Carriage of tents and records	70 0 0	.....	.....	5 12 0	.....	10 12 0	.....	.....	21 8 0	108 0 0
(c) Rents, rates, and taxes	.....	4 0 0	80 0 0	111 12 4	91 9 0	16 0 0	.....	.....	28 0 0	331 5 4
(d) Pay of police guards	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(e) Official postage	354 9 6	77 6 0	69 15 0	66 0 6	112 13 0	81 6 0	34 13 0	42 9 0	69 2 6	908 12 6
(f) Sundries	1,060 13 0	160 10 0	614 2 10	182 2 0	144 13 0	188 7 0	64 7 0	140 8 0	178 6 2	2,734 5 0
Total B.—Establishments	33,931 4 10	23,047 9 3	22,172 9 2	6,452 3 4	27,562 14 10	20,060 6 4	12,918 4 6	27,096 3 1	15,163 12 3	1,87,405 3 7
GRAND TOTAL OF EXPENDITURE	55,549 5 2	28,512 4 0	36,572 2 5	11,100 7 7	36,181 12 8	28,147 15 0	21,157 10 5	37,214 2 1	19,363 4 11	2,73,799 0 3

CALCUTTA:
The 6th June 1890.

J. BRIDGNELL, *Chief Superintendent,*
in charge Forest Account Branch, Comptroller-General's Office.

Dr. ANNUAL FORM NO. 59 [PRESCRIBED].—*Account-current for the year 1889-90.* *Cr.*

	Rs. A. P.	Rs. A. P.
To cash balance ...	.....	3,152 0 11
VIII—*Assessed Taxes*—		
Income-tax deductions from salaries ...	.....	3,125 7 9
Revenue as per Annual Summary Form No. 58 ...	.....	18,06,069 6 6
To Service Funds—		
Civil Fund, Ordinary, Bengal ...	.....	.....
Civil Fund, Additional, Bengal ...	.....	.....
Military Fund, Bengal ...	.....	.....
Military Fund, Madras ...	.....	.....
Military Orphan Fund, Bengal ...	.....	.....
Uncovenanted Service Family Pension Fund, Bengal ...	1,803 8 0	.....
Uncovenanted Service Family Pension Fund, Bombay ...	383 1 0	.....
Hindu Family Annuity Fund ...	.....	2,185 9 0
To Deposits ...	.....	.....
„ *Forest Cash Remittances (Local)*—		
Forest cheques drawn ...	2,64,674 3 0	.....
Inter-divisional transfers ...	7,397 12 8	2,72,071 15 8
To Advances recoverable ...	.....	1,12,557 1 10
„ Suspense ...	.....	984 15 11
„ *Account current (other Governments)*—		
Remittances from Government of India ...	1,215 15 10	.....
Remittances from Government of Punjab ...	0 8 0	1,215 7 10
To Inter-departmental Transfers—		
Public Works Department State Railways ...	.....	.....
Public Works Department other Branches ... (Rs. A. P. 669 9 7)	669 9 7	.....
Military Department, Bengal ...	827 11 4	.....
Military Department, Madras ...	53 15 10	.....
To Civil Department—		
Jail ... (261 5 8)	.....	.....
Mathematical Instrument Department ... (696 13 0)	.....	.....
Survey of India Department ... (161 9 0)	.....	.....
Miscellaneous ... (56-11 9)	1,196 7 5	.....
Marine Department ...	1 0 0	2,748 12 2
Total ...	.....	22,04,110 13 7

	Rs. A. P.	Rs. A. P.
By Expenditure as per Annual Summary Form No. 58 ...	.....	2,73,799 0 3
„ Deposits ...	.....	.....
By Forest Cash Remittances (Local)—		
Remittances to treasuries ...	17,89,635 13 3	.....
Inter-divisional transfers ...	6,424 5 6	17,96,060 2 9
By Advances recoverable ...	.....	1,12,294 8 4
„ Suspense ...	.....	646 10 3
By Account-current (other Governments)—		
Remittances to the Government of India ...	.....	1,950 0 0
By Inter-departmental Transfers—		
Public Works Department, State Railways ...	.....	.....
Public Works Department, other Branches (Rs. A. P. 18,791 11 1)	18,791 11 1	.....
Military Department ...	.....	.....
Civil Department ...	.....	.....
Miscellaneous ...	500 0 0	.....
Marine Department ...	164 2 6	19,455 13 7
By Cash balance ...	.....	604 10 5
Total ...	...	22,04,110 13

CALCUTTA:
The 6th June 1890

J. BRIDGNELL, *Chief Superintendent,*
in charge Forest Account Branch, Comptroller-General's Office.

ANNUAL FORM NO 60 [PRESCRIBED].—*Revenue Received and Outstandings on account of Revenue during 1889-90.*

Division	Particulars	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total	Amount realized during year.	Balance due to the department at end of year.	Remarks
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Bhamo	Revenue received during 1889-90	.....	1,60,705 13 2	1,60,705 13 2	1,60,705 13 2	.....	
Chindwin		.....	35,151 3 1	35,151 3 1	35,151 3 1	.....	
Katha		.....	1,456 12 6	1,456 12 6	1,456 12 6	.....	
Mandalay		.....	2,55,844 4 4	2,55,844 4 4	2,52,903 0 4	2,941 4 0	
Minbu		.....	84,726 9 6	84,726 9 6	69,462 9 6	15,264 0 0	Sale proceeds of Yaw timber.
Mu		.....	79,302 10 8	79,302 10 8	79,302 10 8	.....	
Pyinmana		2 4 6	9,42,640 1 1	9,42,642 5 7	9,41,245 6 10	1,396 14 9	
Yaw		2,191 7 2	2,61,717 14 7	2,63,909 5 9	2,63,909 5 9	.....	
Direction		.....	1,932 8 8	1,932 8 8	1,932 8 8	.....	
	Total ...	2,193 11 8	18,23,477 13 7	18,25,671 9 3	18,06,069 6 6	19,602 2 9	

ANNUAL FORM NO. 61 [PRESCRIBED].—*Statement of Outstandings and Liabilities on account of Contractors and Disbursers for 1889-90.*

Division.	Department debtor.			Department creditor.			Balance due.		Remarks.
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year	At close of year.	To department (outstandings)	By department (liabilities).	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Direction	.....	27,689 15 3	27,689 15 3	5,571 4 8	23,490 11 1	29,061 15 9	1,372 0 6	.....	
Bhamo	.....	7,060 12 5	7,060 12 5	.....	7,060 12 5	7,060 12 5	.....	.....	
Chindwin	.....	25,740 5 6	25,740 5 6	1,554 7 2	26,607 15 5	28,162 6 7	2,422 1 1	.....	
Katha	.....	7,428 6 1	7,428 6 1	.....	8,046 7 2	8,046 7 2	618 1 1	.....	
Mandalay	.....	25,578 6 3	25,578 6 3	933 4 4	26,190 5 2	27,123 9 6	1,545 3 3	.....	
Minbu	.....	11,327 2 10	11,327 2 10	1,334 14 2	10,652 9 4	11,987 7 6	660 4 8	.....	
Mu	.....	3,627 2 7	3,627 2 7	1,475 15 8	5,767 13 6	7,243 13 2	3,616 10 7	.....	
Pyinmana	.....	3,997 9 6	3,997 9 6	202 10 0	4,292 12 6	4,495 6 6	497 13 0	.....	
Yaw	.....	107 5 5	107 5 5	.....	185 1 9	185 1 9	77 12 4	.....	
Total ...	.....	1,12,557 1 10	1,12,557 1 10	11,072 8 0	1,12,294 8 4	1,23,367 0 4	10,809 14 6	.....	

CALCUTTA.
The 6th June 1890.

J. BRIDGNELL, *Chief Superintendent,*
in charge Forest Account Branch, Comptroller-General's Office.

ANNUAL FORM No. 62 [PRESCRIBED].—*Financial Results of the year 1889-90.*

Division	Timber and other produce removed from the forests by Government agency.		Other revenue.		Formation, protection, and improvement of forests.	Total.		Remarks.
	Receipts.	Charges.	Receipts.	Charges	Charges.	Receipts.	Charges.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Bhamo	.....	.....	2,46,349	17,159	18,296	2,46,349	35,455	
Chindwin	.....	.....	2,95,054	25,238	18,277	2,95,054	43,515	
Katha	.....	.....	84,854	8,264	9,780	84,584	18,044	Expenditure for four months only.
Mandalay	.....	.....	96,305	20,598	22,528	96,305	43,126	
Minbu	.....	.....	50,278	16,998	16,929	50,278	33,927	
Mu	.....	.....	76,433	13,938	14,164	76,433	28,102	
Pyinmana	.....	.....	9,41,246	21,420	22,738	9,41,246	44,158	
Yaw	3,514	1,165	11,861	13,064	13,243	15,375	27,472	
Direction	.....	.....	177	.....	.....	177	.....	
Total ...	3,514	1,165	18,02,555	1,36,679	1,35,955	18,06,069	2,73,799	

APPENDIX A.

Statement exhibiting the Cost of Feed of Elephants of the Forest Department for the official year 1889-90 as compared with that of the Commissariat Department for the same period.

Division.	Number of elephants at the beginning of the year.	Number of elephants received during the year.	Casualties during the year.	Transferred to other divisions during the year.	Number at the close of the year.	Cost of feed.	Cost of keep, including gear, &c	Cost of medicine.	Total expenditure during the year	Average monthly cost per animal of the Forest Department	Average monthly cost per animal of the Commissariat Department.	Amount paid by officers for carriage of elephants	Value of labour in cash receipts and work performed	Remarks.
						Rs.	Rs.	Rs.	Rs.	Rs. A. P.	Rs A. P.	Rs	Rs.	
Bhamo	4	1	...	...	5	65	1,229	28	1,322			110	..	Calf shown in last year's form died on the 2nd September 1889
Chindwin	5	1	...	...	6	93	1,498	...	1,591			122	3,632	
Katha	...	4	...	..	4	4	317	..	321			56	..	This statement does not include one elephant stolen at Thaton shortly after purchase as it was never actually received.
Mandalay	5	4	2	2	5	113	1,139	62	1,314			76	..	
Minbu	3	3	1	2	3	...	997	182	1,179	24 13 3	97 5 9	107	...	
Mu	2	1	...	...	3	...	777	15	792			164	...	
Pyinmana	3	7	...	3	7	29	1,433	69	1,531			227	...	
Yaw	3	2	1	1	3	358	679	10	1,047			22	..	
Direction	4	...	...	1	3	203	2,320	10	2,533			34	...	
Total ...	29	23	4	9	39	865	10,379	376	11,620	...	..	918	3,632	

APPENDIX B.

List of Buildings in the several Divisions exceeding Rs. 200 in Value in the Upper Burma Forest Circle.

Divison.	Number	Name of building.	Station.	Rent	Remarks.
		(a) *Buildings for which rent is payable and rent.*		Rs	
Bhamo	1	Combined office and dwelling	Bhamo	22	
Chindwin	1		Kindat	..	Rent not fixed as yet.
Katha	1		Katha	..	Under construction.
Mandalay	1		Mandalay	55	
Minbu	1		Minbu	27	
Mu	1	Dwelling	Ye-u	...	Under construction.
Pyinmana	1	Combined office and dwelling	Pyinmana	25	
Yaw	1		Pakôkku	20	
		(b) *Buildings for which no rent is paid.*			
Bhamo	1	Revenue station house	Bhamo	...	Under construction.
Chindwin	1	Subdivisional Forest office and bungalow ...	Alon	...	
Katha	1		Tigyaing	..	
	1		Bernardmyo	...	
Minbu	1	Subdivisional Forest office	Taungdwingyi	...	
Mu	1	Drift station house	Kyaukmyaung	...	
	1	Revenue station house	Myinmu	..	
	1		Toktalôk .. .	...	
	1	Forest office	Ye-u	...	
Pyinmana	1	Subdivisional Forest office and bungalow	Yamèthin	...	
	1	Forest rest-house	Kontha	..	

APPENDIX C.

Statement showing Summary of Valuation Surveys for the year 1889-90.

District	Name of forest.	Locality.	Area in acres counted out.	Teak trees counted out. Green. I.	Green. II.	Green. III.	Green. IV.	Girdled. I.	Girdled. II.	Girdled. III.	Girdled. IV.	Dead.*	Stumps.	Padauk.	Pyinkado.	Cutch.	Remarks.
								Bhamo Division.									
Bhamo	Mangin ...	Mangin ...	10	6	4	84	...	28	59	87	...	...	224	...	...	...	
			18	31	69	285	...	33	63	175	...	...	117	...	...	...	
			11	7	18	149	...	9	39	113	...	...	166	...	...	...	
			9	9	34	157	...	3	19	53	...	...	98	...	...	...	
			12	48	107	223	...	17	25	36	...	...	102	...	...	...	
			7	27	51	124	...	11	19	29	...	...	61	...	...	...	
			8	15	23	93	...	4	9	23	...	...	126	...	...	...	
			7	2	6	187	...	...	3	14	...	...	78	...	...	...	
			3	2	7	21	48	...	1	23	15	...	66	...	...	...	
			6	6	44	94	49	2	6	12	3	...	39	...	...	...	
			17	13	18	63	65	9	14	33	11	...	100	...	...	...	
			16	4	34	69	27	5	16	19	4	..	61	...	...	...	
			10	6	19	270	...	4	9	23	...	...	126	...	...	...	
		Total ...	134	176	434	1,928	...	125	262	640	...	...	1,374	...	...	...	
		Per acre ...	...	1·3	3·2	13·6	...	·9	2·1	4·8	...	...	...	...	...	...	
					18·2				7·8								
	Uya-Hatha ...	Uya-Hatha	20	33	39	70	30	2	2	4	...	...	76	...	...	...	
			3	...	47	104	60	2	3	21	1	...	27	...	...	...	
			20	10	12	34	...	14	16	11	...	...	58	...	...	...	
			14	13	46	40	...	29	13	2	...	...	29	...	...	...	
			12	20	25	23	...	17	16	7	...	...	53	...	...	...	
			24	26	64	67	...	21	37	25	...	...	102	...	...	...	
			11	14	25	26	...	12	19	15	...	...	41	...	...	...	
		Total ...	104	115	258	364	...	97	106	85	...	...	386	...	...	...	
		Per acre ...	...	1·1	2·5	3·5	...	·9	1·0	·8	...	...	3·7	...	...	...	
					7·1				2·7								
	Namyin	Namkwan chaung ...	20	35	71	228	...	...	...	15	...	...	...	...	...	...	
		Pampan chaung ...	24	27	44	85	...	...	...	...	...	...	...	...	...	...	
			28	134	225	375	...	...	...	...	...	...	19	...	...	...	
		Mohnyin ...	87	465	294	402	...	16	...	...	...	...	...	...	...	...	
			26	46	241	324	...	...	...	...	...	...	...	...	...	...	
			38	128	125	171	...	...	...	...	...	...	...	...	...	..	
		Total ...	223	835	1,000	1,585	...	16	...	15	...	...	19	...	...	...	
		Per acre ...	...	3·7	4·5	7·1	...	·1	...	·1	...	...	·1	...	...	...	
					15·3				·1								
								Chindwin Division.									
	Kunsè ...	Kunsè chaung ..	43·4	101	132	139	75	16	...	...	...	45	8	...	...	...	
			48	125	286	297	220	29	...	...	...	24	8	...	...	...	
		Total ...	91·4	226	418	436	295	45	...	...	...	69	16	...	...	...	
		Per acre ...	...	2·5	4·6	4·8	3·2	·5	...	...	...	·8	·1	...	...	..	
					15·1				1·4								

Upper Chindwin	Mauk ..	Mauk chaung ...	50·8	128	250	269	212	39	...	...	...	57	14	...	...	...
			68·2	110	283	297	184	...	...	...	...	39	6	...	...	...
			73·4	165	312	301	296	15	...	...	...	64	19	...	...	...
			76·8	136	322	391	221	40	...	...	...	55	16	...	...	...
		Total ...	269·2	539	1,167	1,258	913	94	...	...	...	215	55	...	...	...
		Per acre ...	...	2·0	4·3	4·7	3·4	·3	...	...	...	·8	·2	...	...	...
	Myitthà ...	Nwa chaung	40	24	8	11	21	20†	...	...	...	2	7	...	...	...
		Per acre ...	...	·6	·2	·3	·5	·5	...	...	...	...	·2	...	...	...
						14·4				1·3						
						1·6				·7						
								KATHA DIVISION.								
Katha ...	East Shweli	Maingtha chaung... ...	59	52	35	77	339	35	...	...	...	...	171	...	...	...
		Per acre ...	...	·9	·6	1·3	5·7	·6	...	...	...	...	2·9	...	...	...
		Thè chaung	9	25	13	15	212	38	...	...	...	...	6	...	...	...
		Per acre ...	...	2·8	1·4	1·7	23·6	4·2	...	...	...	...	·7	...	...	...
						8·5				3·5						
Momeik ...	Sekkala ...	Sekkala chaung ...	26·5	20	82	389	120	15	...	...	...	...	74	...	...	...
		Per acre ...	...	·8	3·1	14·7	4·5	·6	...	...	...	...	2·8	...	...	...
						29·5				4·9						
Katha ...	East Shweli	Nahan chaung	41·3	56	60	243	81	20	...	...	...	...	131	...	...	...
		Per acre ...	...	1·4	1·5	5·9	1·9	·5	...	...	...	...	3·2	...	...	...
						23·5				3·4						
		Nanpaw chaung ...	35·5	12	18	33	69	5	...	...	...	68	62	...	...	...
		Per acre ...	...	·3	·5	·9	1·9	·1	...	...	...	1·9	1·8	...	...	...
						10·7				3·7						
		Kyaing chaung	2·6	2	4	30	54	1	...	...	...	...	6	...	...	...
		Per acre ...	...	·8	1·5	11·5	20·8	·4	...	...	...	...	2·3	...	...	...
						3·7				3·8						
		Namè chaung	241·	153	181	1,077	1,692	136	...	...	...	...	683	...	...	...
		Per acre ...	...	·6	·7	4·5	7·0	·6	...	...	...	...	2·6	...	...	...
						34·6				2·7						
						13·4				3·4						
								MANDALAY DIVISION.								
Ywangan ...	Ywangan	Kansè, Aingnepu, and Miko...	74	54		45	180	20	...	...	...	...	162	...	...	...
		Inhla, Kyatan, and Kogwet	238	134		154	1,027	52	...	...	...	...	245	...	...	...
		Tazetgyi	34	30		38	163	8	...	...	...	...	20	...	...	...
		Thayetpaik and Madigyi ...	78	45		69	384	12	...	...	...	...	106	...	...	...
		Patetgyi	91	91		112	548	32	...	...	...	...	170	...	...	...
		Thayetpaik, Myaukyawye, and Tazetgyi.	43	147		109	325	28	...	...	...	...	158	...	...	...
		Patchaungbya	123	62		75	177	32	...	...	...	...	109	...	...	...
		Kanaw and Kubyin ...	54	10		18	180	7	...	...	...	...	25	...	...	...
		Minpalaung and Waywet ...	90	23		64	399	2	...	...	...	...	216	...	...	...
		Baka	92	99		73	244	28	...	...	...	...	160	...	...	...

* Includes also dying and absolutely worthless trees. | † Of these three were girdled by Government agency.

Statement showing Summary of Valuation Surveys for the year 1889-90—continued.

District.	Name of forest.	Locality.	Area in acres counted out.	Teak trees counted out. Green. I.	Green. II.	Green. III.	Green. IV.	Girdled. I.	Girdled. II.	Girdled. III.	Girdled. IV.	Dead.*	Stumps.	Padauk.	Pyinkado.	Cutch.	Remarks.
				Mandalay Division—continued.													
Ywangan—*concld.*	Ywangan—*concluded.*	Baka, Daleiu, and Nganè ...	116	29		50	556	17	...	...	...	...	253	...	...	...	
		Kanaw	118	171		98	256	96	...	...	...	...	137	...	...	...	
		Magyiye, Ngwetaung, and Thazayit.	59	26		35	187	10	...	...	...	...	53	...	...	...	
		Total ...	1,210	941		965	4,628	351	...	...	...	...	1,833	...	...	...	
		Per acre ...	...	·8		·8	3·8	·3	...	...	...	...	1·5	...	...	...	
Meiktila ...	Hlaingdet	Kubyin	100	77		53	217	13	...	...	...	...	93	...	...	...	
		Kubaung and Pyinyaung ...	52	36		37	149	36	...	...	...	...	79	...	...	...	
		Nanpantit and Inmagyi ...	132	97		74	111	29	...	...	...	...	150	...	..	...	
		Total ...	284	210		164	477	78	...	...	...	...	322	..	...	...	
		Per acre ...	...	·7		·6	1·7	·3	...	...	...	...	1·1	...	...	...	
Yamèthin ...	Theingôn ...	Pinmôn	74	53		29	42	33	...	...	...	...	60	...	...	...	
		Per acre ...	...	·7		·4	·6	·5	...	...	...	..	·8	...	...	...	
Thibaw ...	Thibaw	Nanma river	154	29	44	58	832	27	...	...	...	...	93	...	.	...	
		Waseik	62	31	18	23	565	202	...	...	...	...	213	...	...	...	
		Seinnaungmwôn ...	32	14	19	40	296	27	...	...	...	...	93	...	...	...	
		Bawgyo-Ônko	46	24	31	70	230	17	..	...	...	...	110	...	...	...	
		Ônko-Sumôn	128	22	31	64	869	49	...	...	..	...	48	...	...	..	
		Sumôn-Ngasalôn	18	1	7	15	443	18	...	...	...	...	17	...	...	...	
		Total ...	442	121	150	270	3,225	340	...	...	...	..	574	...	...	...	
		Per acre ...	...	·3	3	·6	7·3	·8	...	...	...	...	1·3	...	...	...	
		Kabom-Pahai	22	39	51	68	406	14	...	...	...	...	7	...	...	...	
		Pabai-Saiheng	42	27	49	128	673	27	...	...	...	...	21	...	...	...	
		Saiheng-Namka	102	143	183	272	663	140	...	...	...	...	72	...	...	...	
		Saiheng-Mainlon	50	42	64	129	198	19	...	...	...	...	24	...	...	...	
		Kônmyaungtaungbyauk ...	60	294	385	208	125	269	...	...	..	...	203	...	..	...	
		Total ...	276	645	732	805	2,065	469	...	...	...	..	327	...	..	...	
		Per acre ...	...	2·3	2·7	2·9	7·5	1·7	...	...	...	...	1·2	...	...	...	
Mandalay ...	Madaya	Chaungthapaw	24	1	5	2	1	6	...	...	...	...	2	..	..	...	
		Kwè chaung	64	6	3	6	43	3	...	...	...	...	6	16	87	...	
		Total ...	88	7	8	8	44	9	...		..	...	8	16	87	..	
		Per acre ...	...	·1	·1	·1	·5	·1	..	..	...	...	·1	...	...	..	

			Minbu Division.														
Minbu	Mon.	Kandaung hills	4	4	3	9	50*	...	...	...	...	...	30	...	...	...	
		Pōn hills	11	43	48	63	57	...	...	...	...	...	84	...	...	...	
		Saung hills	6	11	17	11	20	3	2	...	...	...	30	...	...	...	
		Namadaung hills	6	25	20	10	15	2	...	...	...	...	19	...	...	...	
		Paungchaung hills	5	7	8	9	15	4	3	...	...	...	39	...	...	...	
		Total	32	90	96	104	157	9	5	...	...	...	193	...	...	...	
		Per acre	...	2·8	3·0	3·2	4·9	·3	·2	...	...	...	6·0	...	...	...	
					14					6·5							
			Mu Division.														
Wuntho	Tinwa	Tinwa	264·2	248	139	135	114	60	11	3	...	...	...	...	...	...	
		Per acre	...	·9	·5	·5	·4	·2	·0	·0	...	...	...	...	...	...	
					2·3					·2							
	Nabè	Nabè	182·4	223	74	110	105	95	23	...	...	...	...	...	...	...	
		Per acre	...	1·2	·4	·6	·5	·5	·1	...	...	...	...	...	...	...	
					2·7					·6							
	Wabo	Wabo	262	229	49	29	12	5	...	...	...	...	...	...	...	...	
		Per acre	...	·8	·1	·1	·0	·0	...	...	...	...	...	...	...	...	
					1·2					·0							
		Namaw	85·8	4	14	56	34	4	8	1	...	...	...	...	...	...	
		Per acre	...	·0	·1	·6	·3	·0	·0	·0	...	...	...	...	...	...	
					1·0					·0							
		Namua	116·6	37	48	51	25	2	1	...	...	...	...	...	...	...	
		Per acre	...	·3	·4	·4	·2	·0	·0	...	...	...	...	...	...	...	
					1·3					·0							
		Khansa	51	5	8	17	26	...	...	...	...	...	...	...	...	...	
		Per acre	...	·0	·1	·3	·5	...	...	...	...	...	...	...	...	...	
					1·1												
		Inga	144	13	17	24	32	4	2	...	...	...	...	...	...	...	
		Per acre	...	·1	·1	·2	·2	·0	·0	...	...	...	...	...	...	...	
					·6					·0							
			Pyinmana Division.														
Pyinmana	Sinthe	Aingye, N. W.	60·8	...	...	...	...	...	...	...	...	...	...	...	...	...	No teak.
		Aingye, S. E.	47·4	2	1	5	10	9	...	...	...	...	1	...	...	...	
		Aingye, S. W.	68·0	21	31	52	14	31	...	...	...	...	45	...	...	...	
		Kanhla, S. W.	164·4	3	4	14	33	5	...	...	...	...	19	...	...	...	
		Total	340·6	26	36	71	57	45	...	...	...	...	65	...	...	...	
		Per acre	...	·0	·1	·2	·2	·1	...	...	...	...	·2	...	...	...	
					·5					·3							

* Includes also dying and absolutely worthless trees.

Statement showing Summary of Valuation Surveys for the year 1889-90—concluded.

District.	Name of forest.	Locality.	Area in acres counted out.	Teak trees counted out. Green I.	Green II.	Green III.	Green IV.	Girdled I.	Girdled II.	Girdled III.	Girdled IV.	Dead	Stumps.	Padauk.	Pyinkado.	Outch.	Remarks.
				Pyinmana Division—concluded.													
Pyinmana ...	Panlaung ...	Yesin, N.	48·2	12	9	21	78	4	...	...	...	...	13	...	...	...	
		Yesin, E.	18·0	13	17	12	17	6	...	...	...	...	30	...	...	...	
		Yesin, S. E.	51·8	5	20	104	181	14	...	...	...	...	2	...	...	...	
		Ngasin, S E.	67·0	25	41	154	84	6	...	...	...	...	50	...	...	...	
		Shwemyo, N. E. ...	52·2	...	1	4	35	...	...	...	...	...	...	...	...	...	
		Shwemyo, S. E.	63·8	...	...	9	35	2	...	...	...	...	2	...	...	...	
		Thèyin, S. W.	40·0	1	2	3	1	...	...	...	...	...	...	...	...	...	
		Thèyin, W.	62·2	13	9	37	5	17	...	...	...	...	9	...	...	...	
		Kyinlin, N E	32·0	10	3	2	...	1	...	...	...	...	10	...	...	...	
		Kyidaung, N E	54·0	70	71	76	51	60	...	...	...	...	2	...	...	...	
		Shwekyidaung, N. ...	49·8	18	9	15	2	32	...	...	...	...	7	...	...	...	
		Thetha chaung, N E. ...	44·0	37	9	5	5	5	...	...	...	...	4	...	...	...	
		Thanpyaung chaung, W ...	84·0	9	23	42	76	46	...	...	...	...	8	...	...	...	
		Kwetugale	18·0	33	8	9	3	6	...	...	...	...	20	...	...	...	
		Hlwegyi chaung, N. E. ...	58·0	79	27	9	...	4	...	...	...	...	...	...	...	...	
		Salu, W.	28·0	19	9	25	12	12	...	...	...	...	1	...	...	...	
		Nancho, S. W.	21·4	15	22	25	8	7	...	...	...	...	1	...	...	...	
		Tilyubin, E	61·4	11	4	5	39	10	...	...	...	...	10	...	...	...	
		Thitpók, S. E. ...	17·0	10	1	1	2	15	...	...	...	...	...	...	...	...	
		Seikpudaung, N W ...	37·0	16	6	2	6	5	...	...	...	...	3	...	...	...	
		Seikpudaung, S. ...	36·0	9	8	13	103	2	...	...	...	...	3	...	...	...	
		Thitkyin, W. ...	56·0	9	4	11	93	...	...	...	...	...	3	...	...	...	
		Total ...	999·8	414	303	584	836	254	...	...	...	...	178	...	...	...	
		...		·4	·3	·6	·8	·3	...	...	...	...	·2	...	...	...	

			Yaw Division													
Pakkku	Yaw	Top of Pymmin range to Dudaw	16	6	3	18	205	13	...	..	...	..	11	...	...	..
		Between Taungbogyi and Thigon villages	20	3	3	12	203	9	...	...	...	...	29	.	...	..
		Between Taungbogyi and Thigon villages	16	6	9	19	120	15	..	...	...	...	19	...	..	...
		East and south-east of Thigon	12·8	9	11	30	255	2	..	..	...	...	14	...	...	...
			56	48	112	172	768	15	...	...	...	...	89	..	...	...
		West of Thigon and Saw villages	16	41	10	19	122	12	.	...	.	...	10	...	...	..
			16	42	18	20	114	12	...	...	...	...	16	...	...	...
			27	62	29	53	272	16	.	..	...	...	27	...	...	...
			13·4	23	7	20	174	13	...	.	...	...	85	...	...	..
		West of Saw	6	14	4	11	41	1	..	...	..	..	1	...	...	..
		West of Saw and Kadin villages	22	20	7	10	197	4	...	...	...	...	24	...	...	...
			7·4	18	3	2	17	..	. .	...	...	...	3	..	...	...
			20	43	19	34	89	12		...	...	...	37	...	..	...
			17	32	11	34	45	5	...	...	...	...	7	...	...	...
			9·4	17	2	4	9	4	...	..	...	...	17	..	...	...
		Kadin chaung to Ku chaung	19·6	84	18	12	84	7	...	...	..	...	2	...	...	...
		Ku chaung to Mu chaung ...	24·4	71	2	9	10	4	..	...	...	...	4	..	..	...
		Kyaw chaung to Chi chaung west of Yaw	40	34	10	15	40	7	...	...	...	...	2	...	...	.
			24·2	16	4	2	17	5	...	...	...	...	1	..	...	..
			40	78	25	59	310	11	...	...	...	...	7	..	...	...
		Yesin village on Chichaung, N W., to Yaw river	16	12	20	13	6	...	...	...	...	...	...	4	...	107
		Kyiywa to Peinne, west water shed, thence north and north west to Tilin-Kyi road	36	90	120	149	20	24	...	...	...	...	...	5	...	177
		Along Tilin road to Chindwin watershed	6	25	29	33	5	3	...	.	...	...	...	3	...	30
		Between Kyandaw and Ka chaung villages	30·2	23	12	22	53	3	...	...	...	...	9	...	..	...
		Total ...	511·4	817	486	777	3,176	197	..	..	.	.	364	12	..	314
		Per acre ..	..	1·2	·9	1·5	6·2	4	..	...	...	..	7	·0	..	.6
				10·2				11								

Includes also dying and absolutely worthless trees

APPENDIX D.

Statement of Teak Trees girdled during season 1889-90.

Division.	Girdling officer.	Revising officer.	Range.	District	Locality.		Number of teak trees
Chindwin.	Maung Maung, Forester.	Mr. Blackwell, Offg Deputy Conservator of Forests.	.....	Kale.	Kyauk-ka stream		92
					Pabauk stream		190
					Mogalé stream, left bank		9
					Nwa stream		270
		Maung Maung, Forester	.....	Pakokku.	Kyi chaung	Maiñ stream	152
						Ya thagaung chaung headwarters	50
						Sinmagan chaung	47
						Tinwa chaung	165
						Kyundaya chaung	120
						Danyin chaung	62
						Sabadan chaung	113
						Bodaung chaung	101
						Nyaung chaung	297
						Ban chaung	82
					Tanthe chaung	Tanthe chaung, main stream	683
						Tin chaung	90
						Wè chaung	69
						Yit chaung	17
						Sinswe chaung	135
						Ngayin	125
						Kyaing	75
					Setin chaung	Setin chaung, main stream	169
						Hnyitshauk chaung	260
						Ngayangyauk chaung	213
						Myothnyaung chaung	241
						Walan chaung	80
						Kyaing chaung	36
						Baung chaung	32
						Dazan chaung	52
						Yobok chaung	185
					Laungbogyi chaung		78
					Mè chaung		41
					Lahan chaung		112
					Laungtaung chaung	Laungtaung chaung, main stream	117
						Pinwin chaung	37
						Sinthè chaung	146
						Panlé chaung	129
						Pané chaung, right bank	605
						Pane chaung, left bank	772
						Pane chaung, headwaters	305
						Pawlaw chaung, headwaters	246
						Pawlaw chaung, right bank	158
						Pawlaw chaung, left bank	354
						Tôn chaung	143
						Wagaing chaung	30
						Pwò chaung	54
	Mr. H N. Thompson, Assistant Conservator of Forests.	Mr H. N. Thompson, Assistant Conservator of Forests	Kale.	Kale.	Kunse chaung	Main stream, right bank	112
						Main stream, left bank	430
						Sisho chaung	107
						Nyaunggyin chaung	378
						Yinyè chaung	35
						Shwehlaw chaung	118
						Kyawdaw chaung	241
						Palkkun chaung	484
					Mauk chaung.	Mauk chaung, right bank	201
						Mauk chaung, left bank	373
						Myauk chaung	45
						Shauk chaung	386
						Taungpila chaung	84
						Wabo chaung	238
						Peinnyin chaung	245
						Tin chaung	374
						Chaungsôn chaung	4
	Mr. H Slade, Deputy Conservator of Forests	Mr H. Slade, Deputy Conservator of Forests.	Kale.	Kale.	Bôn chaung.	Nanzalin chaung: Main stream, south bank	564
						Nanzalin chaung: Main stream, north bank	297
						Nanzalin chaung: Kyaungkyauk chaung	203
						Nanzalin chaung: Sadwin chaung	66
						Nanzalin chaung: Nayandwin chaung	81
						Nanzalin chaung: Main stream, headwaters	203
					Bôn chaung.	Lampan chaung: Sakan chaung	232
						Lampan chaung: Main steam	522
						Lampan chaung: Yebya chaung	283
						Kyun chaung	106
						Bon, main stream	52
						Bon-Yebya chaung	54
						Kadet chaung	11
						Nyaungbin chaung, east bank	388
						Nyaungbin chaung, west bank	60
						Kyathôn chaung	503
						Kyetpyu chaung	73
					Carried over		15,187

Statement of Teak Trees girdled during season 1889-90—continued.

Division.	Girdling officer.	Revising officer.	Range.	District.	Locality.		Number of teak trees.
						Brought forward ...	15,187
Chindwin.	Mr H. Slade, Deputy Conservator of Forests.	Mr H Slade, Deputy Conservator of Forests.	.....	Kale.	Nansipauk chaung	Thapan chaung	318
						Chin chaung	180
						Main stream, right bank	314
						Main strem, left bank	144
						Kyun chaung	195
						Sadwin chaung	74
						Nyaunglin chaung	163
						Wadaik chaung	221
						Wabo chaung	14
						Nwengan chaung	222
					Nansipet chaung	Main stream	304
						North letet	135
						South letet	81
						Zunya chaung	389
					Kwamakan chaung		198
					Naukyimlaw chaung, right bank		416
					Naukyimlaw chaung, left bank		285
				Upper Chindwin.	Nampamun chaung.	Taung chaung	356
						Tapan chaung, south letet	178
						Thapan chaung, north letet... ...	562
						Aukchin chaung	261
						Atetchin chaung	318
						Main stream, right bank	265
						Main stream, left bank	458
						Main stream, headwaters	264
						Main stream, north letet	561
						Ashe chaung, north bank	351
						Ashe chaung, south bank	435
						Alé chaung	167
					Nansawin chaung.	Main stream, north bank	1,332
						Main stream, south bank	1,053
						Shaukbin chaung	275
						North letet	321
					Pyaungbôk chaung.	Sadwin chaung, right bank	765
						Sadwin chaung, left bank	329
						Alè chaung	276
					Kyun chaung, south Bank		206
					Kyun chaung, north bank		206
						Total Chindwin division ..	27,757
Mandalay.	Mr C. W. Allen, Sub-Assistant Conservator.	.....	Pyaungshu.	Yatsauk.	South bank, Myitngè above Taungbyauk ferry.	Paulauk	127
						Thayetye	75
						Pounè	645
						Total Mandalay division ...	847
Mu.	Mr J C. Murray, Deputy Conservator of Forests.	Mr J. C. Murray, Deputy Conservator of Forests.	.....	Wantho..	Kyaw chaung		582
					Tinwa forest.	Between Kongwe and Thon chaungs.	206
						Between Kongwe and Wayaw chaungs	307
						Between Hlekwe and Waba chaungs...	297
						Between Hlekwe and Thôn chaungs ...	226
					Nabé forest.	East of Nabè chaung	95
						West of Nabè chaung	451
						Thôn chaung	256
					Wabo forests.	Kyauksou chaung...	308
						Yè è chaung	190
						Wottanu chaung	24
						Nyaungchidauk chaung	376
						Gaya chaung	825
					Nanbyan forests.	Theiktawbauk chaung	188
						Between Kyetudin and Nanbyan .	68
						Kyetudin chaung	367
						Between Laungbwa and Kyauktaga ...	501
						Between Kyaukta a and Sinthigaing chaung.	285
						Between Kyauktaga and Kyetudin chaungwa.	97
						Sources of Chaungsauk chaung ..	335
						Chaungsauk chaungwa	42
						Between Kyauktaga and Thechauk chaungs.	172
					Nankyitha forests.	East of Pogaungsa chaung	100
						Between Pogaungsa and Naukhmwa ..	70
						Between Naukhmwa and Nankyitha ...	60
						Between Nankyitha and Tapan chaungs.	95
						Wunthi chaungs	151
						Carried over ...	5,008

Statement of Teak Trees girdled during season 1889-90—concluded.

Division	Girdling officer.	Revising officer.	Range.	District.	Locality.	Number of teak trees.
					Brought forward ..	5,908
Mu—*concluded.*	Mr. J. C. Murray, Deputy Conservator of Forests.	Mr. J. C. Murray, Deputy Conservator of Forests.		Ye-n.	Maingwun forests. — Panyo chaung	73
					Maingwun forests. — Naungnyet chaung	105
					Maingwun forests. — Chaik chaung	24
					Maingwun forests. — Inga chaung	18
					Maingwun forests. — Theindôn chaung	930
					Welamon chaung	100
					Letpan chaung	138
					Wenantaw chaung	215
					Laungbinkyi chaung	55
					Welôn chaung	40
					Thebyu chaung	333
					Saguhaung chaung	72
					Sources of Thebyu chaung	221
					Kyettegyaing chaung (sources of Saguhaung) ...	35
					Total Mu division ...	7,679
					Grand total ...	36,180

Articles of Agreement made and entered into this twenty-first day of December 1889 between the SECRETARY OF STATE FOR INDIA IN COUNCIL hereinafter called the said Secretary of State of the one part and MAUNG BAUK hereinafter called the said grantee of the other part: WHEREAS the said grantee and his brother MAUNG MUN TAW now deceased had under the late Burmese Government certain rights or privileges in respect of the felling extracting and exporting of teak timber the produce of land now the property of Government (being the forests hereinafter referred to and hereafter more particularly described) and had agreed to pay therefor a sum of Rs. 5,00,000 annually: AND WHEREAS the sum so payable in respect of the year 1888 has been paid to the Government in advance: AND WHEREAS the said MAUNG MUN TAW died on the fourth day of April 1889: AND WHEREAS the said grantee is desirous of being permitted to continue to fell extract and export such timber which the said Secretary of State is willing to permit subject to certain terms and conditions to which the said grantee has assented: Now it is hereby witnessed that in pursuance of the premises and in consideration of the due payment of the rent or royalty hereby reserved and of the observance and performance of the covenants and conditions hereinafter contained and on the part of the grantee to be observed and performed he the said Secretary of State doth hereby (subject nevertheless to the provisoes hereinafter contained) grant unto the said grantee the sole and exclusive license and authority to fell and extract for export from Upper Burma teak timber the produce of all forests drained by tributaries of the Irrawaddy river falling into the Irrawaddy river between Bhamo and Mandalay also all forests drained by the Molè stream above Bhamo and by the Nampwe stream below Sinbo exclusive of any forests within the Mogaung subdivision of the Bhamo district. AND to that end doth further grant him full and free right and liberty of ingress egress regress passage and way into from and about the said forests for himself his workmen and servants and with or without elephants buffaloes carts and other appliances: To have and to hold the easements and premises hereby granted unto the said grantee and his assigns from the 1st day of January 1888 up to and inclusive of the 30th day of September 1895 yielding and paying therefor a rent or royalty on every log extracted at the following rates that is to say for timber measuring not less than 4 feet 6 inches in girth in the middle between the two ends and not less than 18 feet in length Rs. 12-8-0 per ton of 50 cubic feet and for timber of less dimensions Rs. 7-8-0 per ton of 50 cubic feet to be paid before the timber is brought past the Government revenue station at Mandalay or such other revenue station as the local Government of Burma may from time to time notify: PROVIDED always that the sum of Rs. 5,00,000 paid to Government in advance as aforesaid shall be taken to have been in full payment for all timber extracted between the 1st day of January and the 31st day of December 1888 and that if the value (calculated at the foregoing rates) of the timber extracted during the said period has been or is less than the said sum of Rs. 5,00,000 the grantee shall not be entitled to receive any remission or refund in respect of the amount by which the said sum of Rs. 5,00,000 may exceed the value of the timber extracted: PROVIDED also that nothing herein contained shall be taken as preventing Government from felling and taking away any timber in and from the said forests for Government purposes: PROVIDED also that as against the grantee and without prejudice to the rights in that respect of Government all residents of Upper Burma shall at all times and without payment to the grantee of any fee or demand whatsoever have full right and liberty to fell and extract timber the produce of the forests aforesaid for sale or use in Upper Burma without let or hindrance from the grantee his workmen or servants and shall for that purpose have as full rights of access to the said forests as is hereby conferred upon the grantee: AND PROVIDED also that any question as to the territorial limits of the forests aforesaid shall be referred to the decision of the Conservator of Forests or other officer for the time being in charge of the Forest division within which

the said forests are situate whose decision subject to an appeal to the local Government of Burma the grantee hereby covenants to accept as final and binding: AND PROVIDED further that for the purposes of these presents timber shall be deemed to have been extracted only when it shall have been brought to the Government revenue station at Mandalay or other revenue station notified by the local Government as aforesaid or delivered under a requisition or disposed of for use in Upper Burma in manner hereinafter provided and that the grantee's right of property in and to all timber felled by them shall be subject to and dependent on such extraction until the effecting of which and the payment of the rent or royalty due in respect thereof and the affixing thereto of the Government hammer-mark denoting such payment the grantee shall not be deemed to have acquired the ownership of such timber:

And the said grantee doth hereby covenant for himself his legal representatives and assigns that he or they will by themselves their workmen and servants work the said forests during the continuance of these presents and will at all times observe and perform and cause his or their servants and workmen to observe and perform the following covenants and conditions that is to say:

That he or they will before any timber is brought past the Government revenue station at Mandalay or such other station as may be notified as aforesaid pay or cause to be paid to the Forest Officer in charge of the station all rent or royalty due in respect of such timber:

That he or they will in each year during the continuance of these presents (except the year 1888) and in the year 1895 before the 30th day of September extract from the said forests not less than 20,000 tons of teak timber and will also in each such year (save and except the year 1888) fell a sufficient number of teak trees to yield 20,000 tons:

That if in any year (except the year 1888) the grantee shall extract less than the minimum number of 20,000 tons he or they shall pay such sum as will together with the royalty paid for that year amount to a total of Rs. 2,50,000 to be paid in each case before the end of the year in which the deficiency has occurred unless—

(i) in the opinion of the local Government there have been unusual difficulties in the way of extraction of timber from the forests sufficient to account for the deficient extraction; and

(ii) the local Government is satisfied that the grantee or they had provided ample dragging and other working power to extract the minimum number of tons if circumstances had been usually favourable:

That he and they will not assign mortgage sublet or part with the easements and premises hereby granted without the consent first obtained of the said Secretary of State.

That no timber felled by him or them shall (except under a requisition as next hereinafter mentioned) be disposed of for use in Upper Burma without the sanction first obtained of the Deputy Conservator of the division and except on payment of the same rent or royalty as would be payable on such timber if it were exported to Lower Burma:

That at all times during the continuance of these presents he and they will comply with any requisition which may be made by the Deputy Conservator or other officer in charge for the time being of any division for the delivery at any place in the ordinary line by which such timber is extracted of any teak timber of the kinds usually extracted by him or them and will as soon as may be after any such requisition has been made deliver the timber specified at the place named in the requisition the rate of payment being that laid down in Rule 21 of thy Rules made under the Upper Burma Forest Regulation 1887 or any rule or regulation which may hereafter be made in supersession thereof provided that no royalty shall be payable in respect of timber so requisitioned and delivered and provided that if the place named in the requisition be below Mandalay or other station notified as aforesaid the grantee or they shall not be bound to deliver timber which at the date of the requisition has passed such station:

That he and they will at all times during the continuance of these presents comply with and observe all laws and regulations or rules having the force of law in any way relating to forest matters in Upper Burma not being inconsistent with the present lease or the rules now in force under the Upper Burma Forest Regulation 1887 and besides will at all times in the working of the forest and the felling and extracting of all teak timber under these presents observe the following rules that is to say—

(*a*) No channel of any perennial stream used for the transit of timber shall be closed or obstructed by any person except under special license to be issued by the Deputy Commissioner or by the officer in charge of the Forest division permitting the erection of a boom or weir.

(*b*) No trees shall be marked or girdled except by or under the directions of the officers of the Forest Department and no trees shall be felled until they have been so marked and girdled and are dead and dry.

(*c*) No trees except such as are hollow in the lower portion of the trunk shall be felled higher than 3 feet from the ground.

(*d*) No teak trees large or small shall be injured by the careless felling or pulling down of trees.

(*e*) Trees shall be logged in such a way as to yield the largest possible outturn of timber.

(*f*) Logs shall not without in each case the permission of the officers of the Forest Department be squared split converted or cut except so far as may be necessary for purposes of extraction.

(*g*) In working in fire-traced forests all necessary and proper precaution shall be taken to prevent the breaking out of fires.

(*h*) That full information regarding and facilities for inspecting the working of the forests shall at all times be afforded to the Conservator of Forests or officer in charge for the time being of the Forest division within which the said forests are situate.

PROVIDED always and it is hereby declared that if the rent or royalty hereby reserved or any sum or sums of money payable by the grantee under or by virtue of these presents shall not be paid at the times and in manner hereinbefore provided or if there is any breach of any of the covenants hereinbefore contained and on the part of the grantee to be observed and performed or any part thereof then and in any such case the said Secretary of State his successors agents or assigns may without notice annul the rights licenses and easements hereby granted and this grant shall thereupon cease and determine and provided also that if the said grantee shall die or become insolvent or have his property sold in execution or if his right and interest in the easements and premises hereby granted shall in any like way be or become transferred without the consent of the said Secretary of State first obtained then and in any such case this grant shall absolutely cease and determine and these presents shall be to all intents and purposes void and of no effect and all timber then unextracted shall be and become the absolute property of the said Secretary of State without liability to make any payment or compensation therefor or in respect thereof to the grantee or any one claiming through or under him: PROVIDED nevertheless that in case of such lapse as last above provided for it shall be open to the said Secretary of State his successors and assigns to give effect to any such transfer or assignment by renewing the grant in whole or in part and either with or without conditions in favour of the person or persons who except for such lapse as aforesaid would have become entitled thereto or of any person or persons nominated by him or them: AND the said Secretary of State hereby covenants that he his successors and assigns will not withhold such renewal if it can be shown to the satisfaction of the Head for the time being of the local Government in Burma that the same will not if carried out be detrimental to the interest of Government: AND the said Secretary of State further covenants with the grantee and his assigns that he or they paying the rents or royalties hereby reserved and observing and performing the covenants and conditions herein contained and on his

and their part to be observed and performed shall at all times during the continuance of these presents enjoy the easements and premises hereby granted without any interruption or disturbance by the said Secretary of State his successors or assigns or any person lawfully claiming under him or them: AND ALSO that the officers of the Forest Department will girdle and mark or cause to be girdled and marked in each year during the continuance of these presents up to and inclusive of 1893 a sufficient number of teak trees for the proper working of the forests it being understood that the grantee shall every year have available for felling a sufficient number of teak trees to yield 40,000 tons: AND it is hereby further witnessed and agreed that immediately on the expiration or sooner determination of this grant all timber the produce of the forests aforesaid which shall not then have been completely extracted shall be the absolute property of Government and that without any liability to make any payment or compensation whatever in respect thereof to the grantee or any one claiming through under or on behalf of him: PROVIDED nevertheless that on and from the expiration of the term of this grant (unless the same shall have been first determined) the grantee shall be allowed a further period of 15 months that is to say up to and inclusive of the 31st December 1896 for the purpose of removing and extracting all timber theretofore felled by him under these presents subject nevertheless to the obligation to payment of the rent or royalty thereon as reserved by these presents and also to all the terms covenants and conditions of these presents so far as the same may apply.

IN WITNESS WHEREOF HERBERT THIRKELL WHITE Officiating Chief Secretary to the Chief Commissioner of Burma by order of the Chief Commissioner of Burma acting for and on behalf of the said Secretary of State and the said grantee have hereunto set their hands the day and year first hereinbefore written.

Signed by the said MAUNG BAUK in the presence of—

(Sd.) C. E FOX,
Government Advocate.

(Sd.) MAUNG BAUK
(*in Burmese character.*)

Signed by the said H. THIRKELL WHITE in the presence of—

(Sd.) C. E. FOX,
Government Advocate.

(Sd.) H. THIRKELL WHITE,
Officiating Chief Secretary.

Agreement made the Eighteenth day of April 1890 BETWEEN the Secretary of State for India in Council of the one part and John William Darwood of Rangoon Esquire and U Kawi of Toungoo (hereinafter called the Contractors) of the other part: NOW THEREFORE the said Secretary of State for himself his successors and assigns on the one part and the Contractors for themselves and each of them for himself their and his executors administrators representatives and assigns respectively on the other part hereby mutually covenant and agree each of them with the other and others of them as follows.

1. That the Contractors will during the period of seven years from the 1st day of January 1889 to the 31st day of December 1895 cut and fell girdled and "nat-that" and "awlè" teak trees in such parts of the Panlaungzawgyi forests of the Hlaingdet district or of any other forests in Upper Burma as may from time to time be approved of by the said Secretary of State and convert the said trees into logs and extract from such forests and deliver during each year of the said term 500 tons of such logs at the Rangoon Timber Depôt or at such intermediate depôts between the said forests and the said Rangoon Timber Depôt as the said Secretary of State may desire and that such timber and logs shall be deemed to have been extracted only on the arrival thereof at the Rangoon Timber Depôt or such intermediate depôts as aforesaid.

2. The Contractors shall not cut mark lop girdle tap or injure any other trees in the said forests than the girdled and nat-that and awlè teak trees and none of such girdled and nat-that and awlè teak trees except those that are hollow in the lower portion of the trunk may be felled higher than 3 feet from the ground and the Contractors will take all proper precautions to prevent any injuries being caused to any other teak trees in the said forest while felling or pulling down any of the said girdled and nat-that and awlè teak trees and if any of such teak trees are injured the Contractors will pay to the said Secretary of State such compensation therefor as may be fixed by the said Secretary of State.

3. The Contractors will not square split or cut the logs except with an axe or adze to make the surface of the log smooth for dragging without first obtaining the consent in writing of the said Secretary of State thereto and all the trees felled by the Contractors shall be logged or converted into logs in such a way as to yield the largest possible outturn of timber.

4. The Contractors shall when engaged in felling trees or doing any other work under this agreement or connected therewith in fire-traced forests adopt such precautionary measures against fire as the said Secretary of State may direct and the Contractors shall pay to the said Secretary of State the sum of Rs. 20 for each log of timber felled by them that may be destroyed or damaged by fire while such logs shall be lying in the forests.

5. The Contractors shall before the month of September in each year push down to the rafting stream all timber that may have previously been floated by them into the main streams of the forests and the Contractors shall be liable for the loss of any timber while in transit to the Rangoon Timber Depôt or to such other intermediate depôts at which they may be required to deliver the timber and shall give notice to the said Secretary of State immediately upon the breaking up of a raft or the loss of any single log and the said Secretary of State shall take such steps as he may think fit or allow the Contractors or any other persons to reform such raft or recover such logs and also to dig out drag out or remove any timber causing a block in any stream and all expenses that may be incurred in doing any of the above acts by the said Secretary of State or any persons acting under his orders shall be deducted by him from any moneys payable to the Contractors under this agreement.

6. The Contractors shall engage a sufficient number of workmen and make all necessary arrangements to work during each working season of the said term in the said forests respectively and will immediately after the expiration of each working season furnish to the said Secretary of State a statement of all timber

that may have been felled by the Contractors in the forests and left in the streams of the forests and the Contractors shall at the request of the said Secretary of State at any time or times during the said term give him full information relating to any work that they may have done or intended to do under this agreement and the Contractors or their agents servants or workmen shall notwithstanding anything herein contained to the contrary be subject to the provisions of the Upper Burma Forest Regulation VI of 1887 or any rules thereunder or any other Acts Regulations or Rules relating to the matter for the time being in force.

7. That the Contractor will not assign mortgage sublet or part with the right to extract timber without the consent of the said Secretary of State.

8. That if in any year of the said term the Contractors deliver less than the said minimum number of tons they shall pay to the said Secretary of State the sum of Rs. 9 for every ton less than the minimum quantity not so delivered unless—

(i) in the opinion of the said Secretary of State there have been unusual difficulties in the extraction of timber from the forests sufficient to account for the deficient delivery; and

(ii) the said Secretary of State is satisfied that the Contractors had provided ample dragging and other working power to extract and deliver the minimum number of tons if circumstances had been usually favourable.

9. That the said Secretary of State will sell at such time or times place or places and in such manner as he may think fit all timber delivered by the Contractors under this agreement at the said Rangoon Timber Depôt or at such intermediate depôts as aforesaid and after deducting all expenses incurred for keeping the timber at such depôts and in connection with the sale thereof and all other charges incurred by the said Secretary of State under this agreement the said Secretary of State shall retain a sum calculated at the rate of Rs. 12 per ton for logs not less than 4 feet 6 inches in girth in the middle between the two ends and not less than 18 feet in length and Rs. 7-8-0 per ton for logs of less dimensions of the timber so sold as the share of him the said Secretary of State in the sale proceeds of the timber and pay the balance of such sale proceeds to the Contractors.

10. If the Contractor shall fail to perform observe and comply with all or any of the conditions herein contained or all or any provisions of the Upper Burma Forest Regulation VI of 1887 or any rules thereunder or of any other Acts Regulations or Rules for the time being in force relating to forests in Burma and on the part of the Contractors to be performed observed and kept as aforesaid the said Secretary of State may at any time thereafter notwithstanding any waiver of any previous breach by the Contractors of any of the conditions herein contained or of the provisions of the Regulations and Rules as aforesaid cancel this agreement.

11. All acts done and orders and directions made or given by any Forest Officers or other Government officials under this agreement shall be as effectual and binding on the Contractors as if the same had been done made or given by the said Secretary of State.

In witness whereof James Emile Bridges, B.C.S., Officiating Chief Secretary to the Chief Commissioner of Burma on behalf of the said Secretary of State for India in Council by the direction of the Chief Commissioner of Burma and the said John William Darwood and U Kawi have hereunto set their hands.

Signed by the said J. E. Bridges in the presence of G. C. Kynoch.	JAMES E. BRIDGES.
Signed by the said John William Darwood in the presence of G. C. Kynoch.	J. W. DARWOOD.
Signed by the said U Kawi in the presence of G. C. Kynoch.	J. W. DARWOOD, *Attorney for U Kawi.*

G B C. P. O.—No 1832, C. S., 18 8 90—400.